**Maryland Survey of Teacher Participation
in High-Quality Professional Development
2003-2004**

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Acknowledgements

Contents

List of Exhibits

Introduction

Teacher professional development is a key component of efforts to improve education for all students. Effective professional development helps sharpen the knowledge and skills of veteran teachers. Effective professional development also enhances the knowledge and skills of new and inexperienced teachers, as well as teachers who may be struggling in their classrooms. Professional development that engages teachers as active learners can boost morale and contribute to increased teacher retention. Conversely, professional development that is not of high quality can undermine teacher commitment to professional learning and, more important, it can undermine reforms.

The *No Child Left Behind Act* (NCLB) highlights the importance of teacher quality and professional development. The law underscores the importance of professional development by requiring states to report annually on the number of teachers who participate in high-quality professional development (Sec.1119a(2)(B)). The statute also requires states to treat the 2002-2003 school year as the baseline and to use the participation number reported in the first year to set targets for annual increases in participation through the 2006-2007 school year.

Most state departments of education, including the Maryland State Department of Education (MSDE), found it difficult to meet this reporting requirement with existing data. Indeed, 19 states did not provide information on the number of teachers who participated in high-quality professional development in their 2003 NCLB reports.

In Maryland, as in other states, the problem is that there is little reliable data on teacher participation in professional development at either the state or local level. In early conversations about options for meeting the NCLB reporting requirement, district staff indicated that they had at least some information on teacher participation in the activities that they sponsored and organized but that they had little or no information about participation in activities for which they did not have direct responsibility. For example, districts could report on the number of teachers who participated in districtwide workshops and similar kinds of activities and they could report on the number of teachers who received full or partial reimbursement for tuition for graduate courses or support for travel to conferences and professional meetings. They could not, however, report on teacher participation in school-based job-embedded activities nor did they have much information on enrollment in graduate courses for which they did not provide tuition reimbursement. In many districts, the data problem was compounded by the fact that records of participation in professional development are maintained in a number of different offices, and the burden of compiling all of the information in a single report would be substantial and possibly quite expensive.

In addition to reviewing the option of compiling district data, MSDE considered the option of reviewing the individual professional development plans that are required of all teachers in Maryland. Discussion of this option revealed that the use and administration of these plans is uneven across the state and that they would not be good data sources.

Finally, it is important to note that in addition to the absence of data on participation, there is virtually no information about the quality of the activities.

Following the review of the various options for reporting on teacher participation in high-quality professional development, MSDE concluded that the most efficient and least burdensome approach to meeting the NCLB reporting requirement would be to survey all public school teachers about their professional development experiences. From the outset, MSDE viewed fulfilling this requirement with a survey as an opportunity to provide districts, MSDE staff, and other stakeholders with comprehensive, up-to-date data on teacher participation in professional development. Thus, MSDE anticipates that the results of the survey can help MSDE staff, districts, providers, and stakeholders assess the overall quality of current professional development activities and strengthen them to meet the professional learning needs of all teachers. The results of the survey can also contribute to the preparation of reports, proposals for external funding, and communications with key stakeholder groups.

This report presents the findings from the 2004 *Maryland Survey of Teacher Participation in High-Quality Professional Development*. The first section of the report explains how the survey was developed and administered, and offers some advice on using the survey results. The second section of the report presents survey findings on the overall patterns of teacher participation in high-quality professional development. Next, the report presents findings about teachers' experiences in the five categories of professional development covered by the survey, the use of online technology in professional development, the availability of various kinds of resources to support teacher participation in professional development, and teachers' perceptions of the clarity and consistency of messages in professional development, their perceptions of the availability of various kinds of support to apply new knowledge and skills, and their priorities for future professional development. The last section offers some concluding observations and recommendations. There are also five appendices:

■   **Appendix A** includes a copy of the survey instrument, annotated with the estimated response frequencies for all teachers in Maryland.

■   **Appendix B** presents survey findings about the content of professional development for elementary school teachers, middle school teachers, and high school teachers.

■   **Appendix C** presents survey findings about participation in high-quality professional development by elementary school teachers, middle school teachers, and high school teachers.

■   **Appendix D** presents survey findings about the use of online technology in each of five categories of professional development.

■   **Appendix E** explains the procedures used in analyzing the survey data.

■   **Appendix F** includes recommendations for future cycles of survey administration.

1. Survey Development and Reporting

Early development of the *Survey of Teacher Participation in High-Quality Professional Development* benefited from the advice and guidance of the Maryland Teacher Professional Development Advisory Council[1] and the following professional associations:

- Maryland State Teachers Association

- Maryland Association of Elementary School Principals

- Maryland Association of Secondary School Principals

- Maryland Association for Supervision and Curriculum Development

- Maryland Council of Staff Developers

The Council and these organizations reviewed early drafts of the survey instrument and formally endorsed the final version of the survey. In addition, several versions of the survey instrument were pilot-tested with approximately 200 elementary school, middle school, and high school teachers to ensure readability and comprehension by respondents.

Survey Content

The survey is divided into seven sections. The first five sections ask teachers to report on their participation in five categories of professional development in the period from July 1, 2003– April 20, 2004. The five categories of professional development and the activities subsumed in each are displayed in Table 1.

Together, the activities included in these categories of professional development represent learning opportunities that take place over a relatively long period of time and that require substantial commitments of resources, including time and money, by teachers, schools, and districts. Note, for example, that "workshops, institutes, and academies" are defined as activities that last a day or longer. In addition, and as discussed in more detail later, screening questions about participation in job-embedded professional development and attendance at conferences or professional meetings also asked about the duration of participation in the activities. Respondents who reported involvement in job-embedded activities less than once a month or who reported that their attendance at conferences and meeting lasted for less than a day were not presented with any additional questions about their experiences and they were not counted in the overall estimate of the numbers of teachers who participated in these categories of activities. Thus, short-term activities, such as those that last less than a day and that often have

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[1] The Maryland Teacher Professional Development Advisory Council was a 26-member stakeholder group appointed by Dr. Grasmick in 2002 to review professional development programs and policies and to propose a definition of high-quality professional development and a set of standards to further articulate the definition. The Council's report, *Helping Teachers Help Their Students: The Imperative for High-Quality Professional Development* is available online at http://mdk12.org.

no follow up, are excluded from the survey because they do not meet the definition of high quality.[2]

Exhibit 1
Categories of Professional Development

■ **Graduate Courses**	■ Courses at the masters, doctoral, or advanced studies level available in any public or private institution of higher education in Maryland or any other state
■ **Workshops, Institutes, and Academies**	■ Activities that include multiple sessions that add up to at least a day. These activities include events that are planned and scheduled in advance and that may take place during the regular school schedule or after school, on the weekend, or during the summer. They may also be residential programs that last for several days or a few weeks. These events may take place in schools, the district office, some other central facility, or on a college or university campus.
■ **Coaching or Mentoring Programs**	■ The experience of working with a coach or mentor as part of a new teacher induction program or a formal coaching or mentoring program sponsored by the district or some other entity.
■ **Job-Embedded Professional Development Activities**	■ Professional learning activities that often take place during the regular school day or before or after school. Typically they involve working collaboratively with colleagues, including school-based professional development staff.
■ **Conferences or Professional Meetings**	■ Events such as annual meetings of professional associations or other organizations, as well as special purpose events that may occur only once. In many cases, these events will take place out of the district or perhaps even outside of Maryland.

Each of the first five sections of the survey begins by asking teachers whether or not they participated in any activities in the category. Teachers who reported participation are then presented with a set of questions about their experiences in the activities. Teachers who reported that they did not participate in any activities in the category move to the next section of the survey.

In each of the first five sections the items are parallel and focus on 17 quality indicators, the content of the activities, the availability of financial and other support for participation (e.g., release time, continuing professional development credits), and the use of online technology. In the sixth section of the survey items ask teachers to reflect on the clarity and consistency of messages they receive in professional development, the availability of resources and other support for implementation and use of new knowledge and skills, and their preferences for topics

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[2] NCLB criteria for high-quality professional development also specify that activities should last a day or longer. (NCLB, Sec. 9101 (34) (A))

for future professional development. Items in the last section of the survey ask about experience and current teaching assignments.

The 17 quality indicators cluster in four areas: (1) planning and design of professional development, (2) professional learning opportunities intended to enhance knowledge and skills, (3) follow up, and (4) benefits that result from their participation. The quality indicators addressed in the survey are displayed below in the left-hand column of Exhibit 2, which appears on the next page.

Using Survey Data to Track Teacher Participation in High-Quality Professional Development

Because the NCLB reporting requirement calls for a single number to indicate the percentage of teachers statewide who participate in high-quality professional development each year, MSDE established the data-based definition of high quality that is presented here. A more important function of this data-based definition of high quality is to provide a framework for presenting and reviewing the survey data at the state and local levels.

Exhibit 2 depicts the response pattern that represents Maryland's very rigorous data-based definition of high quality. In this framework, teachers are counted as having participated in high-quality professional development in one or more of the five categories of professional development if their responses to questions about each of the indicators reflected the following response patterns:

■ They had to report being "very involved" or "somewhat involved" in *any two of the four* activities and decisions included in questions about *planning and decision making* in each category of professional development; **and**

■ They had to report that the professional development "frequently" or "sometimes" included *each of the five learning activities specified in survey questions about the learning opportunities*; **and**

■ They had to report that follow up "frequently" or "sometimes" included *each of the four activities specified in survey questions about follow up*; **and**

■ They had to report that they benefited "to a great extent" or "to some extent" in *each of the four areas specified in questions about benefits.*

In other words, teachers had to report participation in activities that reflected 15 of the 17 quality indicators in order to be counted as having participated in high-quality professional development. (See Appendix D for additional technical information about the development of the quality indicators.)

There are several key features of the survey that distinguish it from other surveys of teachers' professional development experiences about professional development. The survey does not ask teachers whether they liked or enjoyed the professional development. Instead, it

Exhibit 2
Using Survey Data to Define High-Quality Professional Development

PLANNING AND DECISION MAKING				
Indicators:	**Very Involved**	**Involved**	**Seldom Involved**	**Not Involved**
■ Determine content	▪ **Or**	▪		
■ Determine learning activities				
■ Set expectations for outcomes	▪ **Or**	▪		
■ Participate in evaluation of course as professional learning				

LEARNING OPPORTUNITIES				
Indicators:	**Frequently**	**Sometimes**	**Seldom**	**Never**
■ Explanations of key concepts and theories	▪ **Or**	▪		
■ Demonstrations of skills and strategies	▪ **Or**	▪		
■ Opportunities to practice skills and strategies	▪ **Or**	▪		
■ Feedback and assessment of understanding of key concepts and theories	▪ **Or**	▪		
■ Feedback and assessment of mastery of skills and strategies	▪ **Or**	▪		

FOLLOW UP				
Indicators:	**Frequently**	**Sometimes**	**Seldom**	**Never**
■ Ongoing opportunities for conversations	▪ **Or**	▪		
■ Explanations/presentations	▪ **Or**	▪		
■ Demonstrations of skills and strategies	▪ **Or**	▪		
■ Feedback and assessment on mastery of skills and strategies	▪ **Or**	▪		

BENEFITS				
Indicators:	**Great Extent**	**Some Extent**	**Limited Extent**	**Not at All**
■ Increased knowledge of subject(s)	▪ **Or**	▪		
■ Increased academic rigor in instruction	▪ **Or**	▪		
■ More differentiated instruction	▪ **Or**	▪		
■ Increased ability to contribute to planned improvement efforts	▪ **Or**	▪		

asks them about their level of involvement in the planning and governance, learning activities, and follow up. It also asks them about the extent to which they think that they benefited from participating in the activities. The survey does call on teachers to remember details about their participation and there is a degree of subjectivity called for in items related to the extent of involvement and amount of benefit that accrue from participation. The two positive response options on the four-item scale for each indicator are interpreted to mean that the component of the activity represented by the indicator was present.

Survey Administration

In spring 2004, the State Superintendent of Schools invited all public school teachers in the state to complete an online version of the survey.[3] (See Appendix E for recommendations for organizing survey administration in the future.) Prior to administering the survey, the survey contractor met with MSDE and district staff to review its plans. It was agreed that the survey would be posted online on April 20, 2004, and that teachers would have four weeks to respond. The general strategy was to invite all teachers by email to complete the survey, providing them with the link with which to access it. In addition to explaining the purpose of the survey and guaranteeing confidentiality, the email provided a toll-free number and an email address for the survey contractor in case of questions or if teachers required assistance in completing the survey. There were fewer than 200 contacts to ask questions or seek assistance. Most of the contacts pertained to questions about who was being asked to complete the survey or to problems in accessing the website that hosted the survey.

During the period of survey administration, the survey contractor regularly updated district liaisons on response rates and encouraged them to communicate with school principals to urge teachers to complete the survey. To maximize response rates, the period of survey administration was extended by two weeks.

There was some variation in how districts organized survey administration. These arrangements almost certainly affected the response rates. For example, one district, which achieved one of the highest response rates, set aside a portion of district professional development day for all teachers to complete the survey. Not only did this result in a 74 percent response rate, it meant that the district devoted just a few hours to survey administration and that there was limited need for follow up with non-respondents. In another district, the assistant superintendent directed principals to set aside time during a regularly scheduled faculty meeting for teachers to complete the survey. In addition, district technology staff were also on hand to help with any computer problems. This strategy yielded an 88 percent response rate and also minimized the need for extensive follow up. At the other end of the spectrum, incomplete or inconsistent communications with principals about the survey and the importance of encouraging teachers to complete resulted in lower response rates. Also, the need for ongoing follow up to increase the initially low response rates required considerable time and energy from district staff who served as liaisons to the survey team.

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[3] Under special arrangements with the survey team, teachers in Allegany County and Worcester County, as well as a few teachers in St. Mary's County, completed paper-and-pencil versions of the survey.

In the end, approximately 30,000 teachers, or about 55 percent of all teachers in the state, responded. Response rates varied across the districts, with 16 districts achieving response rates between 60 percent and 88 percent. Seven of these districts had response rates between 80 percent and 88 percent. Six districts had response rates between 40 percent and 59 percent, and two districts had response rates of 32 percent and 23 percent. In a pattern that was reflected in response rates in most of the districts, elementary school teachers were somewhat more likely to respond to the survey than middle school teachers and high school teachers (52 percent versus 49 percent and 39 percent).

Data Analysis and Reporting

The overall response rate made it necessary to use additional data on teacher characteristics (e.g., years of experience, certification type) to account for non-respondents and to generate estimates of response patterns for all teachers in the state and in each district. (See Appendix E for a detailed explanation of how survey data were weighted to estimate participation patterns.) Following the weighting process, survey results for the districts and for the state are reported as estimated percentages.

Upon completion of data analysis, the survey team prepared reports for 23 of Maryland's 24 districts.[4] These reports explained the development of the survey and how the results were used to generate estimates of the number of teachers who participated in high-quality professional development. These reports also presented detailed information about the survey findings related to participation in each of the five categories of professional development and participation by grade level and years of experience. In addition, the reports present findings about the content of professional development, the use of online technology in professional development, the availability of financial support for participating professional development, and teachers' perceptions of the clarity and consistence of messages about their roles and the availability of various support to help implement new knowledge and skills. Districts also received copies of the survey instrument annotated with the district response frequencies (in estimated percentages) and a technical appendix. These reports present the survey findings without commentary about the strengths or weakness of local professional development programs and practices and encouraged the districts to use them as part of larger efforts to review the quality of professional development. Subsequently, MSDE has urged districts to use the survey results in preparing annual updates to the district master plans.

Limits and Caveats to Using the Survey Results

The survey results are most helpful in understanding teachers' experiences in the five kinds of professional development that were addressed by the survey. As explained above, the survey asks teachers whether they participated in these activities and, if so, to report on the frequency or intensity of their participation or involvement in making decisions about the design and content of the activities, specific types of learning activities, and follow up. The survey also asks teachers to report their perceptions of the benefits they received. Teachers' responses to the

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[4] In Prince Georges County, where the overall response rate was 23 percent, the response rates in the categories used in the weighting process were too low to generate estimates for the county.

survey help define the extent to which the quality indicators may be present or absent in professional development and the frequency with which they come together.

There are several important limits and caveats to using the survey results to understand teacher participation in professional development and to gauge the quality of the activities in which they participate:

■   *The survey results do not capture the full extent of teacher participation in professional development, nor do they capture all of the professional development that is available to teachers.* For example, the section of the survey on workshops, institutes, and academies focuses on activities that last for a day or longer. Activities that last for several hours, such as informational sessions and similar kinds of short-term activities, are not included. Similarly, the survey does not ask about job-embedded activities that occur less than once a month, nor does it count attendance at professional conferences and meetings that last for less than a day.

■   *Questions about (1) involvement in planning and decision making, (2) frequency of participation in various kinds of learning activities, (3) follow up, and (4) benefits of participation in various kinds of professional development call for subjective judgments and draw on teachers' memories.* Therefore, the survey results should be regarded as suggestive of the overall patterns of teacher experiences in professional development. The results should not be considered definitive. Indeed, MSDE and districts are well-advised to collect and review other information on professional development to complement the data presented here. Evaluation reports on specific professional development programs and initiatives, and planning documents and proposals that describe professional development goals and objectives as well as key design features, can be useful complements to the survey data.

■   *The survey results can help assess the overall quality of teachers' professional development experiences, but not the quality of particular activities or initiatives.* Although survey questions focus on participation in five broad categories of professional development, they do not ask about activities or initiatives that are specifically identified (e.g., a graduate course in curriculum development or a workshop on instructional strategies in mathematics) that may fall into these categories.

■   *Data on overall participation patterns in high-quality professional development can set the stage for discussions about local programs and practices, but a more fine-grained review of response patterns for individual questions or sets of questions is more useful for identifying strengths and areas in need of improvement.* In other words, looking at survey results within the categories and in terms of specific indicators is likely to be the most productive way of understanding and using the survey results. Similarly, looking at the results in terms of specific indicators can inform the setting of improvement targets on these indicators and on clusters of indicators (e.g., involvement in planning and decision making, participation in learning activities aimed at improving

knowledge and skills, follow up, benefits). These targets can focus on the categories of activities, clusters of indicators, groups of teachers, or all three.

■ ***The survey yields data on professional development inputs but does not provide much information on outcomes.*** The survey data are helpful in understanding how professional development is organized, the content that it addresses, and the resources that are available to support teacher participation. Data on reported benefits provide very basic information on outcomes for teachers, but the survey does not provide any information on actual changes or improvements in teacher performance or on student outcomes. Therefore, it is important to complement any review of the survey data with a look at other kinds of data, especially data on changes in teacher performance and student outcomes that reflect the goals and objectives of state and local professional development initiatives.

2. Overview of Teacher Participation in Professional Development in 2003-2004

Overall, an estimated 44 percent of teachers reported that they participated in professional development in one or more of the five categories that met the Maryland criteria for high quality, which were discussed above in the Introduction. (See Exhibit 3.) The data displayed in Exhibit 1 also indicate that an estimated 23 percent of teachers participated in high-quality professional development in one of the five categories of activities, while 13 percent participated in high-quality professional development in two categories, and 8 percent participated in high-quality professional development in three or more categories.

Exhibit 3
Participation in High-Quality Professional Development

Exhibit reads: An estimated 44 percent of teachers reported participating in high-quality professional development in one or more categories.

Source: Questions on quality indicators.

Exhibit 4, which appears on the next page, provides information about overall participation in each category of professional development. For example, the first pair of bars in Exhibit 4 indicates that an estimated 34 percent of all teachers statewide reported enrolling in one or more graduate courses and that 10 percent reported enrolling in one or more courses that were of high quality. (Note that the 10 percent who reported enrolling in one or more graduate courses that were of high quality are included in the 34 percent who reported enrolling in graduate courses.) The remaining bars in Exhibit 4 provide similar information about participation in the other four categories of professional development included in the survey.

Exhibit 4
Participation in Professional Development, by Category
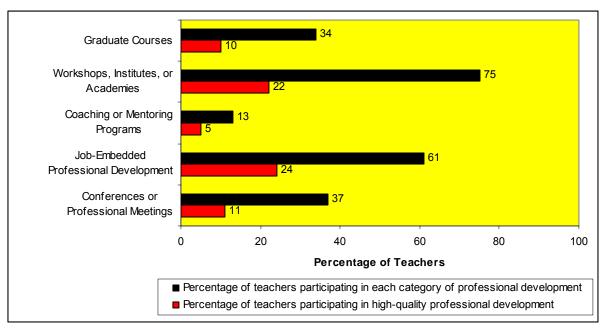
Exhibit reads: An estimated 34 percent of teachers statewide reported enrolling in one or more graduate course(s) and an estimated 10 percent of teachers reported that the course(s) was of high quality.

Source: Questions on quality indicators and questions 1, 11, 23, 34, and 48.

In looking at the data on participation in job-embedded professional development and attendance at conferences or professional meetings, readers should note that the sections of the survey that focused on these two categories begin with two screening questions. In both sections, the first question simply asks whether or not the teacher had participated in activities in these categories. The second question about job-embedded professional development asks teachers to indicate how frequently these activities occurred. Teachers who reported that the activities occurred less than once a month were automatically "skipped" to the next section of the survey and are not counted in the estimate of the total who participated in job-embedded professional development. Similarly, teachers who reported attending a conference or professional meeting were also asked whether the event lasted a day or longer. Teachers who reported that the event did not last a day or longer were automatically skipped to the next section of the survey and are not counted in the estimate of the total who attended a conference or meeting. Overall, an estimated 80 percent of teachers reported participating in job-embedded professional development, but as the data presented in Exhibit 4 indicate, 61 percent reported participating in these activities more frequently than once a month. (Twenty-four percent of teachers who reported participating in job-embedded professional development also reported participating in these activities once a month or less.) Forty-two percent of teachers reported attending a conference or professional meeting; however, 12 percent of those teachers reported that the events lasted less than a day. Therefore, the number of teachers who participated in this category is estimated to be 37 percent.

Workshops, institutes, and academies have long been the staples of teacher professional development, and the survey data indicate that these activities continue their prominence in

Maryland. At the same time, as the recent report of the Maryland Teacher Professional Development Advisory Council noted, there has been an increase in the amount of job-embedded professional development across the state.[5] The survey data on participation in this category appear to confirm this pattern. The survey data also provide a second indicator of the prominence of this category of professional development. The initial screening question, which was intended to ensure that survey respondents included teachers who spend more than half of their time on instruction, included the following response option: "No, because I spend half my time working with other teachers." Just under 2,700 respondents selected this option.

Exhibits 5, 6, and 7 provide summary data on participation in high-quality professional development by grade level (elementary school teachers, middle school teachers, high school teachers), by years of experience (teachers with three or less years of experience, teachers with four or more years of experience) and by the primary content focus of teaching assignment. These data indicate that elementary school teachers and teachers with three or less years of experience are somewhat more likely to report participating in high-quality professional development than teachers in middle schools and high schools and teachers with more experience. In addition, teachers across the content areas report participating in high-quality professional development at about the same rates, with the exception of elementary school teachers who teach in multiple content areas. These teachers are somewhat more likely to report participation in high-quality activities. The overall differences, however, are not large.

Exhibit 5
Participation in High-Quality Professional Development,
by Grade Level

	Percent
Elementary	48
Middle	42
High	38
Other	45

Exhibit reads: An estimated 48 percent of elementary school teachers reported participating in high-quality professional development in one or more categories.

Source: Questions on quality indicators and school-level data provided by MSDE.

Exhibit 6
Participation in High-Quality Professional Development,
by Years of Experience

	Percent
3 years or less	49
4 or more years	43

Exhibit reads: An estimated 49 percent of teachers with 3 years or less of experience reported participating in high-quality professional development in one or more categories.

Source: Questions on quality indicators and question 64.

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[5] See *Helping Teachers Help Their Students: The Imperative for High-Quality Professional Development*.

Exhibit 7
Participation in High-Quality Professional Development,
by Primary Content Area of Current Teaching Assignment

	Percent
English/Language Arts/Reading	41
Mathematics	39
Social Studies	40
Science	36
Special Education	42
Elementary school teacher assigned to multiple subjects	51
Other	41

Exhibit reads: An estimated 41 percent of English/Language Arts/Reading teachers reported participating in high-quality professional development in one or more categories.

Source: Questions on quality indicators and question 69.

In addition to looking at the professional development experiences of teachers by grade level, years of experience, and content area of teaching assignment, the survey data provide information on the professional development experiences of those who work with students who require special education services and those who are identified as gifted and talented. Across the five categories of professional development, teachers who reported that half or more of their students fell into one of these two classifications reported participating in high-quality professional development at rates that are generally similar to those of other teachers.

The *Maryland Teacher Professional Development Standards* include six standards that define the content of high-quality professional development. To collect information on the extent to which these standards are being addressed, the survey asked teachers to report on the content of the activities in which they participated in each of the categories of professional development. Because the first professional development content standard addresses (1) in-depth study of academic content, (2) understanding the Maryland content standards, and (3) using assessments to gauge mastery, the survey asked about each of these topics separately. Exhibit 8 provides information about the content focus of activities that participants rated as high quality.[6]

As the data in Exhibits 8 and 9 indicate, four topics are most frequently reported as the primary content focus of professional development: (1) study of academic content, (2) understanding the Maryland content standards, (3) collaboration for improving instruction, and (4) meeting the learning needs of diverse groups of students. The first two topics are included in Standard 1and related indicators: "Effective professional development deepens all teachers' content knowledge and the knowledge and skills necessary to provide effective instruction and assess student progress." Other topics received much less attention as the primary content focus of teacher professional development.

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[6] Due to a data-processing error, information about the primary content focus of graduate courses is not available.

Exhibit 8
Primary Content Focus of Professional Development, by Category

	Workshops, Institutes, or Academies	Coaching or Mentoring Program	Job-Embedded Professional Development	Conferences or Professional Meetings
Study of the academic content of the subject(s) taught	26	13	15	32
Understanding Maryland content standards	14	14	16	12
Using assessments to gauge student mastery	4	2	6	4
Using research results for decision making	2	1	2	4
Collaboration for improving instruction	14	30	35	13
Meeting the learning needs of diverse groups	25	14	17	18
Maintaining safe and orderly classrooms and schools	3	8	3	3
Engaging families and other stakeholders	1	1	1	2
Other	11	17	5	12

Exhibit reads: An estimated 26 percent of teachers who reported participating in workshops, institutes, or academies reported that the primary focus of the activities was in-depth study of the academic content of the subject (or subjects) taught.

Source: Questions 16, 28, 41, and 53.

One way to view the data in Exhibit 8 is as a profile of the content focus of teacher professional development. Emphasizing academic content, understanding the Maryland's content standards, and meeting the learning needs of diverse groups of students are certainly consistent with state improvement priorities. The data presented in Exhibit 9 further underscore the emphases on these four topics by suggesting that teachers who report that the activities are of high quality are more likely to report that the activities focus on one of these four topics. Overall, very few teachers participate in professional development that focus on the other topics in the six content standards included in the *Maryland Teacher Professional Development Standards.*

To complement the data presented in Exhibit 9, the four exhibits included in Appendix B display the survey findings about the content of professional development by grade level. The data in these four exhibits indicate that the distribution of content by grade level parallels the overall distribution reflected in the data in Exhibit 9.

Together the findings presented thus far suggest that a significant number of teachers across the state participate in at least some professional development that meets Maryland's rigorous criteria for quality. At the same time, these findings also suggest that many teachers participate in professional development that does not meet these criteria. In addition, the findings on the primary content focus of professional development indicate that some of the topics included in the teacher professional development content standards are emphasized more than others. The findings on the content focus, like the other findings, represent a snapshot of professional development in a single year. Therefore, it will be important to track the patterns of content focus over the next several years to gauge the extent to which professional development is addressing all of the content standards.

Exhibit 9
Teacher Participation in High-Quality Professional Development,
by Primary Focus of Activity

	Workshops, Institutes, or Academies	Coaching or Mentoring Programs	Job-Embedded Professional Development	Conferences or Professional Meetings
Study of the academic content of the subject(s) taught	29	19	19	34
Understanding Maryland content standards	15	15	17	15
Using assessments to gauge student mastery	4	2	6	4
Using research results for decision making	2	1	2	4
Collaboration for improving instruction	14	28	33	14
Meeting the learning needs of diverse groups	25	16	16	17
Maintaining safe and orderly classrooms and schools	2	5	2	4
Engaging families and other stakeholders	2	2	2	2
Other	7	11	3	7

Exhibit reads: An estimated 29 percent of teachers who participated in high-quality workshops, institutes, or academies reported that in-depth study of the academic content area taught was the primary focus of the activities.

Source: Questions on quality indicators and questions 16, 28, 41, and 53.

Overall patterns of findings were similar across districts, in the sense that there were no district differences that would result in different sorts of advice for raising percentages of teachers who report participating in high-quality professional development. In particular, the ranking of categories of professional development on participation at all, and on participation in high-quality professional development, remain consistent across districts. Coaching and mentoring is always the category with the lowest levels of participation, and job-embedded activities is most consistently the category with the highest levels. Furthermore, the rate of participation in high-quality professional development is always drastically lower than the overall rate of participation in any professional development, in all categories of professional development across all districts. Other patterns that hold up across districts are: (1) elementary school teachers are more likely to report participating in high-quality professional development than middle school or high school teachers; and (2) less experienced teachers are more likely than more experienced teachers to report participating in high-quality professional development.

3. Teacher Participation in Professional Development by Category

The survey data provide detailed information about teachers' participation in each of the five categories of professional development. Together, the exhibits in this section of the report are helpful in identifying the overall strengths, as well as areas where improvements may be necessary. These exhibits also confirm a key finding from the survey: *Many teachers report participating in professional development activities that reflect at least some of the quality indicators. Fewer report participating in activities that reflect the configuration of quality indicators that meet the Maryland criteria for high-quality professional development.*

In reviewing this section of the report, it is important to keep in mind the Maryland criteria for high-quality professional development. As explained in the Introduction to the report, there are four clusters of quality indicators: (1) involvement in planning and decision making, (2) participation in learning activities intended to improve knowledge and skills, (3) follow up, and (4) reported benefits that follow from participation in professional development. In order to be counted as having participated in high-quality professional development, a teacher had to report involvement in each of the four clusters of indicators in ways that meet the Maryland criteria for high quality.

There are five sets of exhibits in this section of the report—one for each category of professional development. The first exhibit in each set displays the percentage of teachers who reported participation that met the Maryland criteria for high quality in each of the four clusters of indicators. The remaining exhibits in each set provide information about teacher experiences related to each of the indicators. For example, the first bar in Exhibit 10 indicates that 61 percent of all teachers who reported enrolling in one or more graduate courses also reported involvement in planning and decision making related to those courses that met the Maryland criteria for high quality. Further, Exhibit 10a provides information about the percentages of teachers who reported involvement related to each of the quality indicators included under planning and decision making. In looking at the bars in Exhibit 10 and the numbers in each of the related exhibits, it is important to understand that the bars represent the percentage of teachers whose experiences met the criteria for high quality. In some cases, the percentages of teachers whose experiences *in each of the areas represented by the indicators* met the Maryland criteria for high quality may be considerably higher than the percentage of teachers whose experiences met the criteria *in all of the indicators in each of the four clusters of quality indicators*. The reason is that the bars in Exhibits 10, 11, 12, 13, and 14 display the percentage of teachers who participated in professional development in which the various indicators were present in a configuration that met the Maryland criteria for high quality. In reviewing the four exhibits that accompany each of the bar graphs, it is important to recognize that for three of the four clusters (participation in learning activities, follow up, benefits) the percentage of teachers who report experiences that meet Maryland's criteria for high quality in the cluster can not exceed the lowest percentage who reported meeting the criteria on a single indicator. This pattern does not hold for the first cluster of indicators (involvement in planning and decision making) because the quality criteria require that teachers report involvement that meets Maryland's criteria for high quality in any two of the four areas addressed by the indicators.

Exhibit 10
Teacher Experience That Met Maryland's Criteria for High Quality:
Graduate Courses
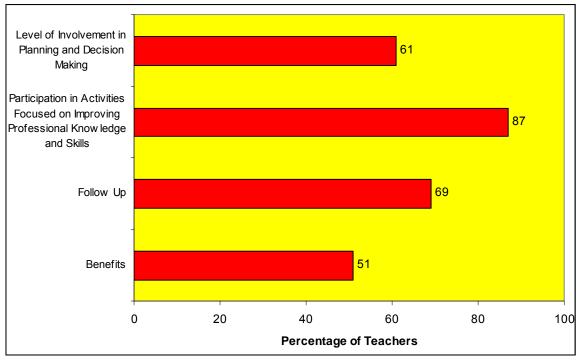
Exhibit reads: An estimated 61 percent of teachers who reported enrolling in one or more graduate course(s) reported involvement in planning and decision making that met Maryland's criteria for high quality.

Source: Questions 6, 7, 8, and 10.

Exhibit 10a
Involvement in Planning and Decision Making in Graduate Courses,
by Quality Indicator

	Very involved/ Involved	Seldom involved/ Not involved
Determining the content	46	54
Determining the learning activities included in the course(s)	59	41
Setting the expectations for learning outcomes	50	50
Evaluating the course(s) as a professional learning opportunity	77	23

Exhibit reads: An estimated 46 percent of teachers who reported enrolling in one or more graduate course(s) reported being very involved or involved in determining or shaping the content of their course(s).

Source: Question 6.

Exhibit 10b
Participation in Activities Focused on Improving Professional Knowledge and Skill in Graduate Courses, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Clear explanations of key concepts and theories	97	3
Demonstrations of skills and strategies related to the key concepts and theories	96	4
Opportunities for you to practice skills and strategies, either as part of regular sessions or as assignments or projects	95	5
Feedback and assessment of your understanding of key concepts and theories	93	7
Feedback and assessment of your mastery of skills and strategies	93	7

Exhibit reads: An estimated 97 percent of teachers who reported enrolling in one or more graduate course(s) reported that their course(s) frequently or sometimes included clear explanations of key concepts and theories.

Source: Question 7.

Exhibit 10c
Follow up to Graduate Courses, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Ongoing opportunities for conversations with your colleagues	82	18
Explanation/presentations on course content	80	20
Demonstrations of skills and strategies covered in the course(s)	82	18
Feedback and assessment of your mastery of skills and strategies covered in the course(s)	80	20

Exhibit reads: An estimated 82 percent of teachers who reported enrolling in one or more graduate course(s) reported that ongoing opportunities for conversations with their colleagues frequently or sometimes occurred as a follow up to their course(s).

Source: Question 8.

Exhibit 10d
Benefits of Participating in Graduate Courses, by Quality Indicator

	To a great extent/ To some extent	To a limited extent/ Not at all
Increased your knowledge of the subject (or subjects) you teach	74	26
Enabled you to add academic rigor to your instruction	77	23
Helped you provide more differentiated instruction for students' learning needs	79	21
Helped you contribute more to your school's planned improvement efforts	70	30

Exhibit reads: An estimated 74 percent of teachers who reported participating in one or more graduate course(s) reported that participation increased their knowledge of the subject (or subjects) they teach to a great extent or to some extent.

Source: Question 10.

Exhibit 11
Teacher Experience That Met Maryland's Criteria for High Quality:
Workshops, Institutes, or Academies
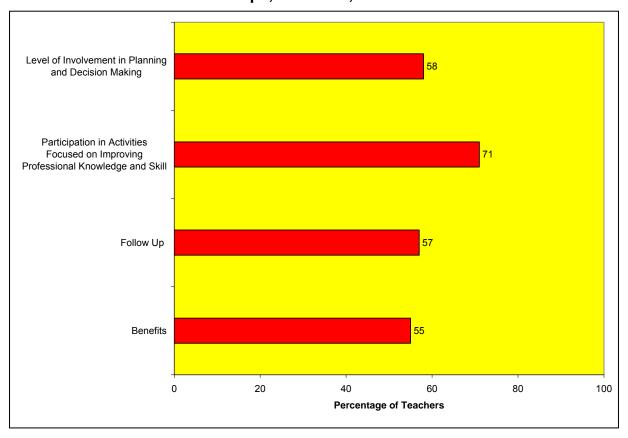
Exhibit reads: An estimated 58 percent of teachers who reported participating in workshops, institutes, or academies reported involvement in planning and decision making that met Maryland's criteria for high quality.

Source: Questions 18, 19, 21, and 22.

Exhibit 11a
Involvement in Planning and Decision Making in Workshops, Institutes, or Academies, by Quality Indicator

	Very involved/ Involved	Seldom involved/ Not involved
Determining the content	48	52
Determining the learning activities included in the workshop/institute/academy	54	46
Setting the expectations for learning outcomes	51	49
Evaluating the workshop/institute/academy as a professional learning opportunity	74	26

Exhibit reads: An estimated 48 percent of teachers who reported participating in workshops, institutes, or academies reported being very involved or involved in determining or shaping the content of their activities.

Source: Question 18.

Exhibit 11b
Participation in Activities Focused on Improving Professional Knowledge and Skill in Workshops, Institutes, or Academies, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Clear explanations of key concepts and theories	95	5
Demonstrations of skills and strategies related to the key concepts and theories	94	6
Opportunities for you to practice skills and strategies, either as part of regular sessions or as assignments or projects	87	13
Feedback and assessment of your understanding of key concepts and theories	82	18
Feedback and assessment of your mastery of skills and strategies	76	24

Exhibit reads: An estimated 95 percent of teachers who reported participating in workshops, institutes, or academies reported that their activities frequently or sometimes included clear explanations of key concepts and theories.

Source: Question 19.

Exhibit 11c
Follow Up to Workshops, Institutes, or Academies, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Ongoing opportunities for conversations with your colleagues	81	19
Explanation/presentations on content of the activity	73	27
Demonstrations of skills and strategies covered in the activity	74	26
Feedback and assessment of your mastery of skills and strategies covered in the activity	65	35

Exhibit reads: An estimated 81 percent of teachers who reported participating in workshops, institutes, or academies reported that ongoing opportunities for conversations with their colleagues frequently or sometimes occurred as a follow up to their activities.

Source: Question 20.

Exhibit 11d
Benefits of Participating in Workshops, Institutes, or Academies, by Quality Indicator

	To a great extent/ To some extent	To a limited extent/ Not at all
Increased your knowledge of the subject (or subjects) you teach	79	21
Enabled you to add academic rigor to your instruction	77	23
Helped you provide more differentiated instruction for students' learning needs	78	22
Helped you contribute more to your school's planned improvement efforts	70	30

Exhibit reads: An estimated 79 percent of teachers who reported participating in workshops, institutes, or academies reported that participation increased their knowledge of the subject (or subjects) they teach to a great extent or to some extent.

Source: Question 22.

Exhibit 12
Teacher Experience That Met Maryland's Criteria for High Quality:
Coaching or Mentoring Programs
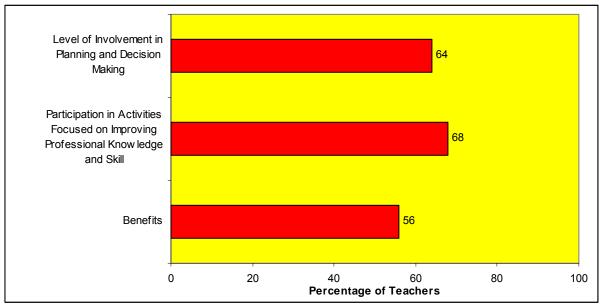
Exhibit reads: An estimated 64 percent of teachers who reported participating in a coaching or mentoring program reported involvement in planning and decision making that met Maryland's criteria for high quality.

Source: Questions 30, 31, and 33.

Exhibit 12a
Involvement in Planning and Decision Making in a Coaching
or Mentoring Program, by Quality Indicator

	Very involved/ Involved	Seldom involved/ Not involved
Determining the content	60	40
Determining the learning activities included in the program	61	39
Setting the expectations for learning outcomes	61	39
Evaluating the program as a professional learning opportunity	62	38

Exhibit reads: An estimated 60 percent of teachers who reported participating in a coaching or mentoring program reported being very involved or involved in determining or shaping the content of their activities.

Source: Question 30.

Exhibit 12b
Participation in Activities Focused on Improving Professional Knowledge and Skill in a Coaching or Mentoring Program, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Clear explanations of key concepts and theories	81	19
Demonstrations of skills and strategies related to the key concepts and theories	79	21
Opportunities for you to practice skills and strategies, either as part of regular sessions or as assignments or projects	80	20
Feedback and assessment of your understanding of key concepts and theories	78	22
Feedback and assessment of your mastery of skills and strategies	77	23

Exhibit reads: An estimated 81 percent of teachers who reported participating in a coaching or mentoring program reported that their activities frequently or sometimes included clear explanations of key concepts and theories.

Source: Question 31.

Exhibit 12c
Benefits of Participating in a Coaching or Mentoring Program, by Quality Indicator

	To a great extent/ To some extent	To a limited extent/ Not at all
Increased your knowledge of the subject (or subjects) you teach	67	33
Enabled you to add academic rigor to your instruction	71	29
Helped you provide more differentiated instruction for students' learning needs	74	26
Helped you contribute more to your school's planned improvement efforts	68	32

Exhibit reads: An estimated 67 percent of teachers who reported participating in a coaching or mentoring program reported that participation increased their knowledge of the subject (or subjects) they teach to a great extent or to some extent.

Source: Question 33.

Exhibit 13
Teacher Experience That Met Maryland's Criteria for High Quality:
Job-Embedded Professional Development
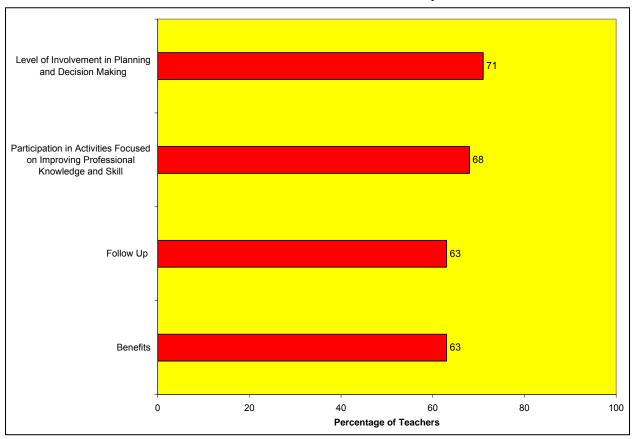
Exhibit reads: An estimated 71 percent of teachers who reported participating in job-embedded professional development reported involvement in planning and decision making that met Maryland's criteria for high quality.

Source: Questions 43, 44, 45, and 47.

Exhibit 13a
Involvement in Job-Embedded Professional Development,
by Quality Indicator

	Very involved/ Involved	Seldom involved/ Not involved
Determining the content	68	32
Determining the learning activities	68	32
Setting the expectations for learning outcomes	67	33
Evaluating the activities as a professional learning opportunity	68	32

Exhibit reads: An estimated 68 percent of teachers who reported participating in job-embedded professional development reported being very involved or involved in determining or shaping the content of their activities.

Source: Question 43.

24

Exhibit 13b
Participation in Activities Focused on Improving Professional Knowledge and Skill in Job-Embedded Professional Development, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Clear explanations of key concepts and theories	91	9
Demonstrations of skills and strategies related to the key concepts and theories	88	12
Opportunities for you to practice skills and strategies, either as part of regular sessions or as assignments or projects	84	16
Feedback and assessment of your understanding of key concepts and theories	78	22
Feedback and assessment of your mastery of skills and strategies	73	27

Exhibit reads: An estimated 91 percent of teachers who reported participating in job-embedded professional development reported that their activities frequently or sometimes included clear explanations of key concepts and theories.

Source: Question 44.

Exhibit 13c
Follow Up to Job-Embedded Professional Development, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Ongoing opportunities for conversations with your colleagues	89	11
Explanation/presentations on the content	81	19
Demonstrations of skills and strategies covered in the activities	78	22
Feedback and assessment of your mastery of skills and strategies covered in these activities	82	18

Exhibit reads: An estimated 89 percent of teachers who reported participating in job-embedded professional development reported that ongoing opportunities for conversations with their colleagues frequently or sometimes occurred as a follow up to their activities.

Source: Question 45.

Exhibit 13d
Benefits of Participating in Job-Embedded Professional Development, by Quality Indicator

	To a great extent/ To some extent	To a limited extent/ Not at all
Increased your knowledge of the subject (or subjects) you teach	77	23
Enabled you to add academic rigor to your instruction	78	22
Helped you provide more differentiated instruction for students' learning needs	80	20
Helped you contribute more to your school's planned improvement efforts	77	23

Exhibit reads: An estimated 77 percent of teachers who reported participating in job-embedded professional development reported that participation increased their knowledge of the subject (or subjects) they teach to a great extent or to some extent.

Source: Question 47.

Exhibit 14
Teacher Experience That Met Maryland's Criteria for High Quality:
Conferences or Professional Meetings
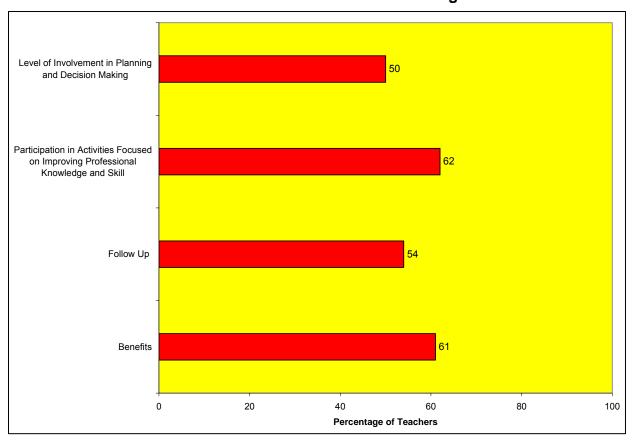
Exhibit reads: An estimated 50 percent of teachers who reported participating in conferences or professional meetings reported involvement in planning and decision making that met Maryland's criteria for high quality.

Source: Questions 55, 56, 57, and 59.

Exhibit 14a
Involvement in Conferences or Professional Meetings,
by Quality Indicator

	Very involved/ Involved	Seldom involved/ Not involved
Determining the content	46	54
Determining the learning activities included in the conference or meeting	48	52
Setting the expectations for learning outcomes	47	53
Evaluating the conference or meeting as a professional learning opportunity	64	36

Exhibit reads: An estimated 46 percent of teachers who reported participating in conferences or professional meetings reported being very involved or involved in determining or shaping the content of their activities.

Source: Question 55.

Exhibit 14b
Participation in Activities Focused on Improving Professional Knowledge and Skill in Conferences or Professional Meetings, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Clear explanations of key concepts and theories	94	6
Demonstrations of skills and strategies related to the key concepts and theories	91	9
Opportunities for you to practice skills and strategies, either as part of meeting or conference sessions or as assignments or projects	79	21
Feedback and assessment of your understanding of key concepts and theories	71	29
Feedback and assessment of your mastery of skills and strategies	65	35

Exhibit reads: An estimated 94 percent of teachers who reported participating in conferences or professional meetings reported that their activities frequently or sometimes included clear explanations of key concepts and theories.

Source: Question 56.

Exhibit 14c
Follow Up to Conferences or Professional Meetings, by Quality Indicator

	Frequently/ Sometimes	Seldom/Never
Ongoing opportunities for conversations with your colleagues	77	23
Explanation/presentations on the content	71	29
Demonstrations of skills and strategies covered in the conference or meeting content	70	30
Feedback and assessment of your mastery of skills and strategies covered in the conference or meeting	59	41

Exhibit reads: An estimated 77 percent of teachers who reported participating in conferences or professional meetings reported that ongoing opportunities for conversations with their colleagues frequently or sometimes occurred as a follow up to their activities.

Source: Question 57.

Exhibit 14d
Benefits of Participating in Conferences or Professional Meetings, by Quality Indicator

	To a great extent/ To some extent	To a limited extent/ Not at all
Increased your knowledge of the subject (or subjects) you teach	82	18
Enabled you to add academic rigor to your instruction	78	22
Helped you provide more differentiated instruction for students' learning needs	79	21
Helped you contribute more to your school's planned improvement efforts	72	28

Exhibit reads: An estimated 82 percent of teachers who reported participating in conferences or professional meetings reported that participation increased their knowledge of the subject (or subjects) they teach to a great extent or to some extent.

Source: Question 59.

The data presented in Exhibits 10–14 (including the accompanying exhibits that focus on each of the quality indicators) suggest the following observations about teachers' experiences in the five categories of professional development:

- ■ ***About 60 percent of teachers who participated in graduate courses, workshops, institutes, academies, and receiving help from a coach or mentor reported involvement in planning and decision making that met Maryland's criteria for high quality in this cluster of indicators.*** Teachers who participated in job-embedded professional development were more likely to report involvement in planning and decision making that met Maryland's criteria for quality (71 percent), and teachers who attended conferences and meeting were less likely (50 percent) to report involvement in these activities that met Maryland's criteria for high quality.

- ■ ***Across the five categories of professional development the survey data suggest that the availability of learning activities focused on improving professional knowledge and skills was a strength.*** For example, 87 percent of teachers who participated in graduate courses, 71 percent of those who participated in workshops, and just over two-thirds of those who participated in coaching and mentoring programs and job-embedded learning reported participation in these activities that met Maryland's criteria for high quality.

- ■ ***Involvement in follow up that met Maryland's criteria for high quality was uneven across the categories.*** Just under 70 percent of teachers who enrolled in graduate courses reported follow up activities that met the quality criteria, whereas 54 percent of teachers who attended conferences and 57 percent who participated in workshops reported follow up that met the quality criteria.

- ■ ***Across the five categories of professional development, between almost 50 percent and just over 60 percent of teachers reported benefits that met the quality criteria.***

Interested readers can review the exhibits included in Appendix C for information about teachers' experiences by grade level. Together, these exhibits reflect the same overall patterns of experience as those in Exhibits 10-14 as well as the general observation that elementary school teachers are more likely to report participation in activities that reflect the Maryland criteria for high quality than their middle school and high school colleagues.

MSDE and districts can use the information in these exhibits in two ways to think about options and opportunities for improving teacher professional development. First, by reviewing Exhibits 10, 11, 12, 13, and 14, they can identify which of the *four clusters of indicators* may require attention. Second, by reviewing teacher experience on each of the indicators within the cluster, they can determine which particular components of professional development organization and design may require attention. Where there are large variations within each of the four clusters of indicators, a good starting point is to focus on the indicators for which the lowest percentages of teachers reported experiences that met the Maryland criteria for high quality. In general, efforts to increase the number of teachers who participate in high-quality

professional development will require focusing on at least several clusters of indicators and on more than one of the indicators in each of the clusters.

Using the survey indicators as a checklist for reviewing the plans for current professional development programs is a good starting point for thinking about re-designing these activities. The review process should address two questions: (1) Does the design of the activities reflect all of the indicators? (2) Does the design afford opportunities for all of the participants to engage in the program components and activities related to each of the indicators?

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4.   The Use of Online Technology in Teacher Professional Development

As increasing numbers of teachers have easy access to computers and to the Internet and as they become skilled at using these tools, various kinds of online communications can become important components of their professional development experiences. To begin to gauge the use of the new communication tools, the survey included three questions about the use of online technology in each of the five categories of professional development. Specifically, the survey asks about using technology to (1) present content, (2) facilitate communication and collaboration among participants, and (3) facilitate communication and feedback to participants from the presenter or facilitator.

Exhibit 15 presents the survey findings on the use of online technology. (The five exhibits included in Appendix D provide more detailed information about the use of online technology in each of the five categories of professional development.) The criteria for "high use" are similar to the criteria for high quality used in reporting on other indicators. Thus, teachers had to report that technology was used "frequently" or "sometimes" in all three ways addressed by the survey for teachers to be counted as participating in activities that included high use of online technology. The survey data suggest that, with the exception of some graduate courses, the use of online technology has not yet become a prominent feature in most teacher professional development. Finally, an overall survey finding is that the use of online technology is strongly correlated with high-quality professional development. In other words, teachers who reported participating in activities that met Maryland's criteria for high quality were more likely to report that the activities included the use of online technology that also met the quality criteria.

Exhibit 15
Use of Online Technology in Professional Development, by Category

	Percent
Graduate courses	62
Workshops, institutes, or academies	46
Coaching or mentoring programs	46
Job-embedded professional development activities	46
Conferences or professional meetings	45

Exhibit reads: An estimated 62 percent of teachers who reported participating in one or more graduate course(s) in which the use of online technology that met the criteria for high use.

Source: Questions 9, 21, 32, 46, and 58.

5. Financial and Other Support for Teacher Participation in Professional Development

Nationally, districts typically spend somewhere between 2 percent and 8 percent of their budgets on teacher professional development. The NCLB holds states and districts accountable for investing in high-quality professional development. In Maryland, the *Bridge to Excellence Act* and the master planning requirements set by MSDE also hold districts accountable for ensuring that resources invested in teacher professional development support high-quality professional learning that is closely aligned with priorities for improving student learning outcomes.

A portion of expenditures for professional development goes to provide stipends, tuition reimbursements, and the costs of travel to meetings and conferences. Other supports and incentives include credits toward certification, continuing professional development credits (often referred to as "MSDE credits"), CPD credits, and release time. In addition to these direct expenditures to support teacher participation in professional development, completion of advanced degree programs and accrual of various kinds of credits require additional and often substantial spending on salaries. Hence, it is of interest to look at spending on professional development and the extent to which the spending supports participation in high-quality activities. To this end, the survey asked teachers to report on the kinds of support that they received for participating in each of the five categories of activities. The survey did not ask about the amount of support received nor did it ask about the source of the support.

Exhibit 16, which appears on the next page, provides two kinds of information about financial support for participation in the five categories of professional development. The first bar in each of the five pairs of bars indicates the percentage of teachers who reported participating in each category of professional development who also reported receiving some kind of financial support for their participation. The second bar in each pair indicates the percentage of teachers who reported participating in the category and receiving financial support and who also reported participating in activities that met the Maryland criteria for high quality. As the data in this exhibit indicate, relatively low percentages of teachers who reported receiving some sort of financial support for enrollment in graduate courses, participation in workshops, and attendance at conferences and meetings also reported that the activities for which they received the support were of high quality. The proportions are considerably higher among teachers who reported receiving financial support for participation in coaching and mentoring programs and job-embedded professional development, but the overall percentages who received financial support for these to areas are much lower than in the other three (12 percent and 20 percent versus 66 percent, 54 percent, and 56 percent).

Exhibit 16
Financial Support* for Participation in Professional Development,
by Category
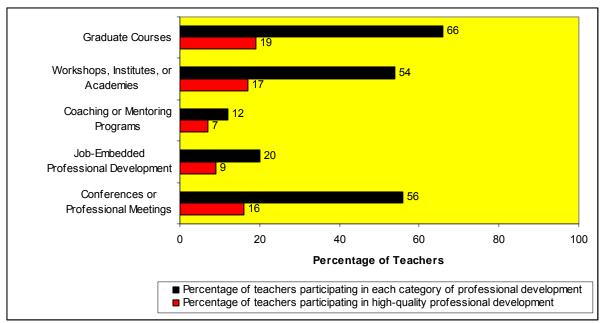
Exhibit reads: An estimated 66 percent of teachers who reported enrolling in one or more graduate course(s) reported receiving financial support for all or some of the graduate courses in which they enrolled and an estimated 19 percent who reported enrolling in one or more courses and receiving financial support reported that the courses were of high quality.

* Financial support includes tuition reimbursement, stipends, reimbursement for travel costs costs, or any other type of financial support received for participating in professional development.

Source: Questions 3, 13, 25, 36, 50.

Exhibits 17 and 18 present data on allocations of release time and CPD credits to support teacher participation in professional development. As in Exhibit 16 above, the first bar in each pair represents the percentage of teachers who reported participation in the category of activity and the second bar represents that percentage who also reported that the activities were of high quality. As the data in Exhibit 17 show, the percentages of teachers who reported receiving release time and who reported that the activities are of high quality are consistently smaller than the percentages of teachers who reported receiving release time. Although the percentages of teachers who reported receiving release time for participating in coaching and mentoring programs and job-embedded professional development are considerably smaller than the other two categories, the percentages who also reported that activities were of high-quality are much larger.

Compared to the other kinds of support and incentives discussed in this section, relatively few teachers reported receiving CPD credits for participating in various kinds of professional development. At the same time, in three of the four categories of activities, the percentages of teachers who received these credits and reported that the professional development activities in which they participated were of high quality are larger than those who reported receiving other

kinds of support. In the fourth category, participation workshops, about a third of teachers who received CPD credits reported that the activities were of high quality.

Exhibit 17
Release Time for Participation in Professional Development,
by Category
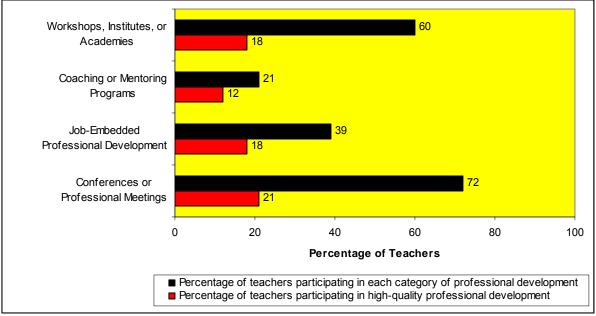
Exhibit reads: An estimated 60 percent of teachers who reported participating in workshops, institutes, or academies reported receiving release time for all or some of the activities in which they participated and an estimated 18 percent reported that the activities were of high quality.

Source: Questions 14, 26, 37, and 51.

In addition to asking about financial support for enrolling in graduate courses, the survey asked teachers whether the courses were required as part of a degree program and whether the courses were required for certification. Forty-nine percent reported that the courses were required as part of a degree program and 15 percent, or just under a third, reported that the courses met the Maryland criteria for high quality. Fifty percent reported that the courses were required for certification and more than a third (16 percent) also reported that the courses met the Maryland criteria for high quality.

Exhibit 18
Continuing Professional Development Credit for Participation in
Professional Development, by Category
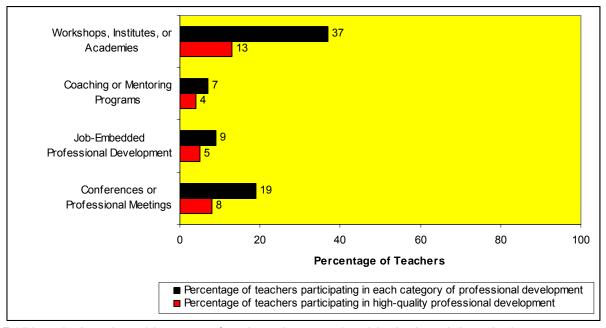
Exhibit reads: An estimated 37 percent of teachers who reported participating in workshops, institutes, or academies reported receiving continuing professional development credit for all or some of the activities in which they participated and an estimated 13 percent reported that the activities were of high quality.

Source: Questions 15, 27, 38, and 52.

The findings about financial and other kinds of support and incentives for participating in professional development suggest that districts may not always get a good return on these various investments in teacher participation in professional development. Typically, district staff and school leaders who are responsible for these allocations of resources have some degree of discretion in their decisions. Using their discretionary authority to allocate resources to support teacher participation in professional development that meets Maryland's criteria for high quality can be an effective way of using market forces to improve the quality of professional development.

6. Teacher Perspectives on the Messages about Their Role and Priorities for Future Professional Development

The survey asks teachers to look across their 2003-2004 professional development experiences and to indicate the extent to which these experiences provided clear and consistent messages about their roles as teachers. Questions in this section of the survey also ask teachers to report on the availability of various kinds of support and resources that can help them use what they learned in the professional activities in which they participated. Finally, the survey asks teachers to indicate their priorities for the content focus of future professional development activities. Readers should note that the content options in this question parallel the content standards of the *Maryland Teacher Professional Development Standards*.

The data in Exhibits 19 and 20 suggest that substantial numbers of teachers thought that the professional development activities in which they participated conveyed clear and consistent expectations for their roles and helped them meet these expectations in working with their students. Elementary school teachers were slightly more likely to see clarity and consistency in the messages than their colleagues in middle schools and high schools. Elementary school teachers were also somewhat more likely to agree that the activities helped them meet these expectations with their students than middle school and high school teachers. Teachers' perceptions about these issues do not vary much by years of experience. Here, it is also important to note the number of teachers who reported "agreement" with these statements is much larger than the number who reported "strong agreement."

Exhibit 19
Perceptions of Messages in Professional Development, by Grade Level

		Elementary School	Middle School	High School	Other School
Together, these activities communicated clear and consistent messages about expectations for my role as a teacher	Strongly agree	22	18	18	22
	Agree	55	54	51	47
	Neither agree nor disagree	17	20	22	21
	Disagree	5	6	7	6
	Strongly disagree	1	2	2	3
Together, these activities helped me learn how to meet these expectations in working with my students	Strongly agree	18	15	15	19
	Agree	58	55	52	52
	Neither agree nor disagree	17	21	24	20
	Disagree	5	8	8	7
	Strongly disagree	1	2	2	2

Exhibit reads: An estimated 22 percent of elementary school teachers strongly agreed that their professional development activities communicated clear and consistent messages about expectations for their role as a teacher.

Source: Questions 60 and 61.

Exhibit 20
Perceptions of Messages in Professional Development, by Years of Experience

		3 Years or Less	4 or More Years
Together, these activities communicated clear and consistent messages about expectations for my role as a teacher	Strongly agree	18	17
	Agree	54	60
	Neither agree nor disagree	20	17
	Disagree	4	5
	Strongly disagree	4	1
Together, these activities helped me learn how to meet these expectations in working with my students	Strongly agree	14	13
	Agree	58	62
	Neither agree nor disagree	20	18
	Disagree	4	6
	Strongly disagree	5	1

Exhibit reads: An estimated 19 percent of teachers with three years or less of experience strongly agreed that their professional development activities communicated clear and consistent messages about expectations for their role as a teacher.

Source: Questions 60 and 61.

Exhibits 21 and 22 present data about teachers' perceptions of the availability of three kinds of resources to help them implement new strategies that were the focus of professional development. Substantial percentages of teachers reported that they always or sometimes

Exhibit 21
Perceptions of the Availability of Support for Implementing New Strategies Learned in Professional Development, by Grade Level

		Elementary School	Middle School	High School	Other School
I have the curriculum materials that I need	Always	29	29	27	31
	Sometimes	59	56	56	48
	Seldom	10	13	12	15
	Never	2	3	4	7
I have the instructional supplies and equipment I need	Always	25	23	20	23
	Sometimes	61	57	57	55
	Seldom	13	17	18	17
	Never	2	3	4	5
There is someone in my school who can give me sound advice	Always	45	43	39	45
	Sometimes	41	41	44	39
	Seldom	11	12	13	12
	Never	3	4	4	5

Exhibit reads: An estimated 29 percent of elementary teachers indicated that they always have the curriculum materials they need to implement the strategies that they learned in professional development.

Source: Question 62.

Exhibit 22
Perceptions of the Availability of Support for Implementing New Strategies
Learned in Professional Development, by Years of Experience

		3 Years or Less	4 or More Years
I have the curriculum materials that I need	Always	26	29
	Sometimes	57	57
	Seldom	14	11
	Never	4	2
I have the instructional supplies and equipment I need	Always	18	24
	Sometimes	59	59
	Seldom	18	15
	Never	4	3
There is someone in my school who can give me sound advice	Always	51	42
	Sometimes	37	43
	Seldom	10	12
	Never	2	4

Exhibit reads: An estimated 26 percent of teachers with three years or less of experience indicated that they always have the curriculum materials they need to implement the strategies that they learned in professional development.

Source: Question 62.

have the curriculum materials and instructional materials that they need to apply what they learned in their classrooms. Similarly, large percentages also report that there is someone in their schools who can give them sound advice about applying the new knowledge and skills. Despite teachers' generally positive assessment of the support that is available to help them use what they learn, the percentages of teachers who report that they always have the curriculum materials and instructional supplies are substantially lower than the percentages of those who report that these resources are sometime available. In contrast, much higher percentages of teachers report that there is always someone in their school who can offer them sound advice. Although the survey responses to these items do not provide any information about the forum or process by which this advice is given, they can be seen as underscoring the potential importance of site-based, job-embedded professional development.

The survey asked teachers to look ahead to future professional development and to indicate their priorities for the content of these activities. Large percentages of teachers assigned a high priority or very high priority to each of the content options listed in the left-hand column of Exhibit 23.

Exhibit 23
Teachers' Priorities for Professional Development Topics for 2004-2005

	Very high/High priority	Low priority/Not a priority
In-depth study of the academic content of the subject you taught	85	15
Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards	84	16
Using assessments to gauge student mastery of Maryland content standards	82	18
Using research results for decision making	69	31
Collaboration for improving instruction	92	8
Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles	93	7
Strategies for creating and maintaining safe and orderly classrooms and schools	81	19
Strategies for engaging families and other stakeholders as active members of school communities	78	22

Exhibit reads: An estimated 85 percent of teachers reported that in-depth study of the academic content of the subject taught was a high or very high priority for their continued professional development.

Source: Question 63.

Teachers at all grade levels and both newer teachers and more experienced teachers are most likely to rate professional development that focuses on (1) collaboration for improving instruction and (2) instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles as a priority, although the differences between the percentages of teachers who rated these topics as high priorities and those who rated other topics as high priorities are small. The exception to this pattern is "using research results for decision making," which was rated as an important priority by about 70 percent of teachers.

7.   Concluding Observations and Comments

Beginning in 1995 with the adoption of the staff development standards of the National Staff Development Council by the Maryland State Board of Education and continuing with the adoption of the new *Maryland Teacher Professional Standards* in 2004, there has been increasing commitment to high-quality professional development for all of Maryland's teachers. The NCLB and Maryland's *Bridge to Excellence Act* added an important accountability dimension to local and state efforts to provide high-quality professional development. Under NCLB, states must report annually on teacher participation in high-quality professional development and use the annual reports to set targets for subsequent annual increases. The *Bridge to Excellence Act* and the master planning requirements set by MSDE reinforce the accountability expectations by calling on districts to explain how resources, including resources for professional development, are aligned in support of local goals for improving student achievement. Districts are also required to report on the extent to which their efforts are paying off in terms of reducing the learning gaps among various subgroups of students. Finally, districts are required to provide annual updates on progress as well as on plans for mid-course corrections in areas where the initial plans did not have the intended outcomes.

In its most recent guidance for annual updates on the implementation of master plans, MSDE has called on districts to (1) articulate an overarching strategy for organizing professional development as a component of larger improvement efforts, (2) profile programs that reflect the strategy, and (3) review the extent to which these programs have met their intended outcomes. Finally, MSDE has encouraged districts to use the results of the 2003-2004 *Maryland Survey of Teacher Participation in High-Quality Professional Development* to review the overall quality of existing programs and to estimate the number of teachers who participated in high-quality professional development in 2004-2005 and to set a target for participation in 2005-2006. Together, these reporting requirements represent a tall order. They also underscore the importance of teacher professional development in any effort to improve the quality of education for all students.

The results of the 2003-2004 *Maryland Survey of Teacher Participation in High-Quality Professional Development* present a mixed picture of teachers' professional development experiences. Using Maryland's very rigorous definition of high-quality professional development, an estimated 44 percent of all teachers in the state participated in professional development that met this standard in one or more of the five categories covered by the survey. At the same time, the survey data also indicate that among teachers who reported participating in professional development in each of the five categories, fewer—many fewer in four of the five categories—reported professional development experiences that did not reflect Maryland's quality criteria.

The survey data suggest that an area of relative strength of professional development is the learning activities that focus on improving teacher knowledge and skills. These activities include presentation of new concepts and information about new practices, opportunities to observe and practice new strategies, and feedback on mastery of new knowledge and skills. Teacher responses to survey questions about indicators in this cluster of indicators are more positive than their responses to questions in the other clusters in four of the five categories. The exception is job-embedded professional development. The survey data suggest that teachers are

less frequently involved in activities related to planning and decision making and follow up. Teachers are also less likely to report that they benefited to a great extent or to some extent from their participation in these activities. Overall, elementary school teachers and teachers with three years or less experience are somewhat more likely than their colleagues at other grade levels and with more years of experience to report participation in activities that meet Maryland's criteria for quality, but these differences are not large.

Because of the relative paucity of solid information about teacher participation in high-quality professional development at the state and local levels, there may be a tendency to overuse the survey results or to place too much emphasis on them to describe current professional development in the state. As noted in the introduction to this report, the survey results are suggestive, but by no means definitive. They draw on teacher perspectives and memories about a variety of learning experiences over a 12-month period. The results provide composite profiles of teacher experiences in five categories of professional development. With the exception of teacher reports on the benefits of these activities, the survey is about inputs. Therefore, the primary value of the survey results is in examining the quality of professional development against a set of indicators.

Staff at MSDE and the districts can use the survey results and the quality indicators to examine the content and process of current professional development programs and initiatives. Survey findings about teacher experiences in activities related to the various quality indicators can help pinpoint components of professional development that may require strengthening. Findings about the similarities and differences in the experiences of teachers who teach at different grade levels and those who are relatively new to the profession versus those who are more experienced can also help identify options for improvements as well as more effective targeting of activities. Findings about the content focus of activities can help MSDE and districts assess the extent to which professional development is addressing key reform priorities. Findings about the availability of various kinds of support for teacher participation in professional development can help assess plans for resource allocation and current professional development investment strategies.

At the risk of some oversimplification, MSDE and the districts exert varying degrees of influence over the five categories of professional development and teacher participation in them. For example, MSDE can influence the quality of district-level activities by requiring activities for which MSDE has some fiscal responsibility to meet the teacher professional development standards and to reflect the quality indicators included in the survey. Similarly, MSDE can influence the quality of courses and other activities that generate CPD credits by requiring that these courses meet the standards before they are approved as credit-bearing activities. Districts exert considerable influence over workshops and coaching and mentoring programs. Districts also exert considerable influence over job-embedded professional development through the assignment of school-based professional development staff to provide and facilitate school-level professional development and by calling on principals and other school leaders to create and maintain professional learning communities for teachers and other adults in the schools.

Ideally, MSDE and the districts will disseminate the survey results among key stakeholders and encourage serious discussion about the validity of the findings and their implications for next steps in improving professional development. It will be especially important to include teachers associations in these conversations to help ensure that negotiated

agreements do not undermine support for teacher participation in high-quality professional development.

MSDE and the districts exert less influence over the content and organization of graduate courses and conferences and professional meetings. Nevertheless, by virtue of the fact that district resources often support teacher participation in these activities, districts can use these resources as a lever to work with colleges and universities and professional associations and other sponsors to ensure that these activities are of high quality. MSDE can exert influence over at least some graduate courses through its many partnerships with Maryland's higher education community.

Do the Maryland criteria for high-quality professional development set the expectations for all professional development and for which schools and districts will be held accountable? The definition of high-quality professional development, along with the new *Maryland Teacher Professional Development Standards,* articulates a vision and framework for assessing the quality of professional development and for designing professional learning opportunities that will produce improved instruction and improved student learning. All stakeholders who are committed to this vision should allow the definition of high-quality professional development and the teacher professional development standards to guide their efforts. They should be accountable for maintaining this focus, consistently striving to improve how they approach it, and making it easily accessible to all teachers. However, the strategies they select and pursue to improve the quality of professional development will depend on their priorities and needs.

Appendix A

Maryland *Survey of Teacher Participation in High-Quality Professional Development*

Maryland Survey of Teacher Participation
In High-Quality Professional Development 2004

District: _____

School: _____

Note: This information will be used for tracking purposes only. Surveys that do not include this information may not be processed.

Does your current assignment require you to spend at least 50 percent of your time in direct instruction of students?
(Darken one circle.)

Ⓐ　　　Yes　(n=26,865)

Ⓑ　　　No, because I spend more than half my time working with other teachers as a coach, mentor, resource teacher, or in a similar role (n=2676)

　　　　(Please seal your survey in the accompanying envelope and return it to the principal.)

Ⓒ　　　No　(n=932)
　　　　(Please seal your survey in the accompanying envelope and return it to the principal.)

Teacher Participation in Professional Development

Section I: Enrollment in Graduate Courses

Questions in this section ask about your enrollment in graduate courses that began after July 1, 2003. Graduate courses are courses at the masters, doctoral, or advanced studies level available in any public or private institution of higher education in Maryland or any other states.

1.   Have you enrolled in one or more graduate course(s) that began after July 1, 2003?

    Ⓐ   Yes (34%)

    Ⓑ   No. **(Go to page 4, Section II, Question 11.)** (66%)

2.   How many courses have you been enrolled in that began after July 1, 2003? **(Darken one circle.)**

    Ⓐ   1 (38%)   Ⓑ   2 (30%)   Ⓒ   3 (14%)   Ⓓ   4 (18%)

3.   Please indicate if the following statements are true regarding the graduate course(s) you reported above. **(Darken the appropriate circles in each row.)**

		Course 1	Course 2	Course 3	Course 4
a.	I was reimbursed for all or some of the tuition.	Ⓨ (63%)	Ⓨ (60%)	Ⓨ (54%)	Ⓨ (44%)
b.	The course was required as part of degree program.	Ⓨ (46%)	Ⓨ (57%)	Ⓨ (67%)	Ⓨ (72%)
c.	The course was required for certification.	Ⓨ (49%)	Ⓨ (45%)	Ⓨ (41%)	Ⓨ (42%)

4.   What was the **primary** content focus of the course(s) in which you have enrolled. **(Choose one per course.)**

		Course 1	Course 2	Course 3	Course 4
a.	In-depth study of the academic content of the subject (or subjects) you teach	N/A	N/A	N/A	N/A
b.	Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards	N/A	N/A	N/A	N/A
c.	Using assessments to gauge student mastery of Maryland's content standards	N/A	N/A	N/A	N/A
d.	Using research results for decision making	N/A	N/A	N/A	N/A
e.	Collaboration for improving instruction	N/A	N/A	N/A	N/A
f.	Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles	N/A	N/A	N/A	N/A
g.	Strategies for creating and maintaining safe and orderly classrooms and schools	N/A	N/A	N/A	N/A
h.	Strategies for engaging families and other stakeholders as active members of school communities	N/A	N/A	N/A	N/A
i.	Other	N/A	N/A	N/A	N/A

5. What **else** did the courses focus on? **(Choose all that apply.)**

		Course 1	Course 2	Course 3	Course 4
a.	In-depth study of the academic content of the subject (or subjects) you teach	Ⓨ(21%)	Ⓨ(21%)	Ⓨ(21%)	Ⓨ(19%)
b.	Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards	Ⓨ(19%)	Ⓨ(19%)	Ⓨ(18%)	Ⓨ(18%)
c.	Using assessments to gauge student mastery of Maryland's content standards	Ⓨ(17%)	Ⓨ(18%)	Ⓨ(18%)	Ⓨ(16%)
d.	Using research results for decision making	Ⓨ(23%)	Ⓨ(25%)	Ⓨ(23%)	Ⓨ(26%)
e.	Collaboration for improving instruction	Ⓨ(33%)	Ⓨ(32%)	Ⓨ(31%)	Ⓨ(30%)
f.	Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles	Ⓨ(33%)	Ⓨ(33%)	Ⓨ(31%)	Ⓨ(29%)
g.	Strategies for creating and maintaining safe and orderly classrooms and schools	Ⓨ(15%)	Ⓨ(17%)	Ⓨ(15%)	Ⓨ(16%)
h.	Strategies for engaging families and other stakeholders as active members of school communities	Ⓨ(14%)	Ⓨ(16%)	Ⓨ(18%)	Ⓨ(18%)
i.	Other	Ⓨ(15%)	Ⓨ(15%)	Ⓨ(14%)	Ⓨ(18%)

6. Looking across the graduate course(s) in which you enrolled, indicate your level of involvement in determining or shaping the following course elements. **(Darken one circle in each row.)**

		Very Involved	Involved	Seldom Involved	Not Involved
a.	The content	Ⓨ (21%)	Ⓨ (25%)	Ⓨ(15%)	Ⓨ(39%)
b.	The learning activities included in the course	Ⓨ(25%)	Ⓨ(33%)	Ⓨ(16%)	Ⓨ(25%)
c.	The expectations for learning outcomes	Ⓨ(20%)	Ⓨ(30%)	Ⓨ(18%)	Ⓨ(32%)
d.	Evaluation of the course as a professional learning opportunity	Ⓨ(32%)	Ⓨ(45%)	Ⓨ(11%)	Ⓨ(13%)

7. Looking across the graduate course(s) in which you enrolled, indicate how often they included each of the following activities focused on improving your professional knowledge and skills. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Clear explanations of key concepts and theories	Ⓨ(74%)	Ⓨ(24%)	Ⓨ(2%)	Ⓨ(1%)
b.	Demonstrations of skills and strategies related to the key concepts and theories	Ⓨ (69%)	Ⓨ(27%)	Ⓨ(3%)	Ⓨ(1%)
c.	Opportunities for you to practice skills and strategies, either as part of regular course sessions or as assignments or projects	Ⓨ(70%)	Ⓨ(25%)	Ⓨ(4%)	Ⓨ(1%)
d.	Feedback and assessment of your understanding of key concepts and theories	Ⓨ (64%)	Ⓨ(30%)	Ⓨ(5%)	Ⓨ(1%)
e.	Feedback and assessment of your mastery of skills and strategies	Ⓨ(61%)	Ⓨ(32%)	Ⓨ(6%)	Ⓨ(2%)

8. Looking across the graduate course(s) in which you enrolled, indicate how often the kinds of follow up listed below have occurred, including follow up provided by college or university faculty, a district or school administrator, a peer coach or mentor, or an external provider. **(Darken one circle in each row.)**

	Frequently	**Sometimes**	**Seldom**	**Never**
a. Ongoing opportunities for conversations with your colleagues	Ⓨ (52%)	Ⓨ (30%)	Ⓨ (11%)	Ⓨ (6%)
b. Explanation/presentations on course content	Ⓨ (48%)	Ⓨ (32%)	Ⓨ (11%)	Ⓨ (9%)
c. Demonstrations of skills and strategies covered in the course(s)	Ⓨ (49%)	Ⓨ (34%)	Ⓨ (11%)	Ⓨ (7%)
d. Feedback and assessment of your mastery of skills and strategies covered in the courses	Ⓨ (46%)	Ⓨ (34%)	Ⓨ (12%)	Ⓨ (8%)

9. Looking across the graduate course(s) in which you enrolled, indicate how often the course(s) included each of the following activities online. **(Darken one circle in each row.)**

	Frequently	**Sometimes**	**Seldom**	**Never**
a. Presentation of the content	Ⓨ (46%)	Ⓨ (22%)	Ⓨ (9%)	Ⓨ (23%)
b. Communication and collaboration among students	Ⓨ (46%)	Ⓨ (26%)	Ⓨ (10%)	Ⓨ (19%)
c. Communication and feedback from the instructor	Ⓨ (48%)	Ⓨ (28%)	Ⓨ (10%)	Ⓨ (14%)

10. Looking across the graduate course(s) in which you enrolled, indicate how much you have benefited in each of the ways listed below. **(Darken one circle in each row.)**

	To a great extent	**To some extent**	**To a limited extent**	**Not at all**
a. Increased your knowledge of the subject (or subjects) you teach?	Ⓨ (36%)	Ⓨ (38%)	Ⓨ (15%)	Ⓨ (11%)
b. Enabled you to add academic rigor to your instruction?	Ⓨ (35%)	Ⓨ (43%)	Ⓨ (16%)	Ⓨ (7%)
c. Helped you provide more differentiated instruction for students' learning needs?	Ⓨ (40%)	Ⓨ (39%)	Ⓨ (15%)	Ⓨ (6%)
d. Helped you be more effective in working with your colleagues?	Ⓨ (31%)	Ⓨ (38%)	Ⓨ (20%)	Ⓨ (11%)
e. Helped you contribute more to your school's planned improvement efforts?	Ⓨ (31%)	Ⓨ (40%)	Ⓨ (19%)	Ⓨ (11%)

Section II: Participation in Workshops, Institutes, and Academies

Questions in this section ask about your participation in professional development activities that are typically called workshops, institutes, or academies and that last a day or longer. Note that an activity that includes multiple sessions that add up to at least a day are included in this category of professional development. These activities include events that are planned and scheduled in advance and may take place during the regular school schedule or after school, on the weekend, or during the summer. They may also be residential programs that last for several days or a few weeks. These events may take place in schools, the district office, some other central facility, or on a college or university campus. These may include some follow up in schools and classrooms.

During the period July 1, 2003 to the present, have you participated in a workshop, institute, academy, or other similar kind of ACTIVITY THAT LASTED A DAY OR LONGER, INCLUDING FOLLOW UP?

11.   During the period July 1, 2003 to the present, have you participated in a workshop, institute, academy, or other similar kind of ACTIVITY THAT LASTED A DAY OR LONGER, INCLUDING FOLLOW UP? **(Darken one circle.)**

   (A)   Yes (75%)

   (B)   No. **(Go to page 7, Section III, Question 23.)** (25%)

12.   In how many of these activities have you participated? **(Darken one circle.)**

   (A) 1 (23%)   (B) 2 (28%)   (C) 3 (19%)   (D) 4 or more (31%)

13.   Did you receive a stipend or other financial support for participating in these activities?

   (A)   Yes, for all of them (19%)

   (B)   Yes, for some of them (34%)

   (C)   No (46%)

14.   Did you receive release time for participating in these activities?

   (A)   Yes, for all of them (30%)

   (B)   Yes, for some of them (30%)

   (C)   No (40%)

15.   Did you receive continuing professional development credit (MSDE credit) for participating in these activities?

   (A)   Yes, for all of them (12%)

   (B)   Yes, for some of them (25%)

   (C)   No (64%)

16. What was the **primary** focus of these activities? **(Choose one.)**

Ⓐ In-depth study of the academic content of the subject (or subjects) you teach (26%)

Ⓑ Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards (14%)

Ⓒ Using assessments to gauge student mastery of Maryland's content standards (5%)

Ⓓ Using research results for decision making (2%)

Ⓔ Collaboration for improving instruction (14%)

Ⓕ Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (25%)

Ⓖ Strategies for creating and maintaining safe and orderly classrooms and schools (3%)

Ⓗ Strategies for engaging families and other stakeholders as active members of school communities (1%)

Ⓘ Other (11%)

17. What **else** did these activities focus on? **(Choose all that apply.)**

Ⓐ In-depth study of the academic content of the subject (or subjects) you teach (30%)

Ⓑ Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards (35%)

Ⓒ Using assessments to gauge student mastery of Maryland's content standards (30%)

Ⓓ Using research results for decision making (19%)

Ⓔ Collaboration for improving instruction (46%)

Ⓕ Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (45%)

Ⓖ Strategies for creating and maintaining safe and orderly classrooms and schools (18%)

Ⓗ Strategies for engaging families and other stakeholders as active members of school communities (15%)

Ⓘ Other (17%)

18. Looking across the workshop(s), institute(s), and academies you reported above, indicate your level of involvement in determining or shaping the following c elements. **(Darken one circle in each row.)**

	Very Involved	Involved	Seldom Involved	Not Involved
a. The content	Ⓨ (18%)	Ⓨ (30%)	Ⓨ (17%)	Ⓨ (35%)
b. The learning activities included in the workshop/institute/academy	Ⓨ (19%)	Ⓨ (35%)	Ⓨ (17%)	Ⓨ (30%)
c. The expectations for learning outcomes	Ⓨ (16%)	Ⓨ (35%)	Ⓨ (18%)	Ⓨ (31%)
d. Evaluation of the workshop/institute/academy as a professional learning opportunity	Ⓨ (25%)	Ⓨ (49%)	Ⓨ (12%)	Ⓨ (14%)

19. Looking across all of the workshop(s), institute(s), or academies you reported above, indicate how often they included each of the following activities focused on improving your professional knowledge and skills. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Clear explanations of key concepts and theories	Ⓨ (61%)	Ⓨ (34%)	Ⓨ (4%)	Ⓨ (1%)
b.	Demonstrations of skills and strategies related to the key concepts and theories	Ⓨ (59%)	Ⓨ (36%)	Ⓨ (5%)	Ⓨ (1%)
c.	Opportunities for you to practice skills and strategies, either as part of regular sessions or as assignments or projects	Ⓨ (48%)	Ⓨ (39%)	Ⓨ (10%)	Ⓨ (3%)
d.	Feedback and assessment of your understanding of key concepts and theories	Ⓨ (39%)	Ⓨ (43%)	Ⓨ (14%)	Ⓨ (5%)
e.	Feedback and assessment of your mastery of skills and strategies	Ⓨ (33%)	Ⓨ (43%)	Ⓨ (17%)	Ⓨ (7%)

20. Looking across all of the workshop(s), institute(s), or academies you reported above, indicate how often the kinds of follow up listed below have occurred, including follow up provided by college or university faculty, a district or school administrator, a peer coach or mentor, or an external provider. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Ongoing opportunities for conversations with your colleagues	Ⓨ (41%)	Ⓨ (40%)	Ⓨ (14%)	Ⓨ (5%)
b.	Explanation/presentations on content of the activity	Ⓨ (29%)	Ⓨ (44%)	Ⓨ (18%)	Ⓨ (9%)
c.	Demonstrations of skills and strategies covered in the activity	Ⓨ (30%)	Ⓨ (44%)	Ⓨ (17%)	Ⓨ (9%)
d.	Feedback and assessment of your mastery of skills and strategies covered in the activity	Ⓨ (23%)	Ⓨ (42%)	Ⓨ (22%)	Ⓨ (13%)

21. Looking across the workshop(s), institute(s), or academies you reported above, indicate how often they included each of the following activities online. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Presentation of the content	Ⓨ (29%)	Ⓨ (24%)	Ⓨ (13%)	Ⓨ (35%)
b.	Communication and collaboration among participants	Ⓨ (29%)	Ⓨ (28%)	Ⓨ (13%)	Ⓨ (31%)
c.	Communication and feedback from the presenter/leader/facilitator	Ⓨ (26%)	Ⓨ (30%)	Ⓨ (14%)	Ⓨ (30%)

22. Looking across the workshop(s), institute(s), or academies you reported above, indicate how much you have benefited in each of the ways listed below. **(Darken one circle in each row.)**

Has participation in these activities:	To a great extent	To some extent	To a limited extent	Not at all
a. Increased your knowledge of the subject (or subjects) you teach?	Y (30%)	Y (49%)	Y (14%)	Y (7%)
b. Enabled you to add academic rigor to your instruction?	Y (29%)	Y (48%)	Y (17%)	Y (6%)
c. Helped you provide more differentiated instruction for students' learning needs?	Y (32%)	Y (47%)	Y (17%)	Y (5%)
d. Helped you be more effective in working with your colleagues?	Y (23%)	Y (44%)	Y (22%)	Y (11%)
e. Helped you contribute more to your school's planned improvement efforts?	Y (26%)	Y (44%)	Y (21%)	Y (10%)

Section III: Participation in a Coaching or Mentoring Program

Questions in this section ask for information about the experience of having a coach or mentor assigned to work with you as part of a new teacher induction program or a formal coaching or mentoring program sponsored by the district or some other entity. ***Note that questions in this section of the survey do not ask about informal coaching or mentoring relationships or other kinds of collaboration between individual teachers.***

23.   Do you currently have a coach or mentor assigned to work with you as part of a formal coaching or mentoring program? **(Darken one circle.)**

    Ⓐ   Yes (13%)

    Ⓑ   No. **(Go to page 10, Section IV, Question 34.)** (87%)

24.   How often do you meet with your coach/mentor? **(Darken one circle.)**

    Ⓐ   Almost daily (20%)

    Ⓑ   Once a week (23%)

    Ⓒ   Several times a month (20%)

    Ⓓ   Once a month (15%)

    Ⓔ   Less than once a month (23%)

25.   Did you receive a stipend or other financial support for participating in the coaching and mentoring program?

    Ⓐ   Yes (12%)

    Ⓑ   No (88%)

26.   Did you receive release time for participating in the activities included in the coaching and mentoring program?

    Ⓐ   Yes, for all of them (8%)

    Ⓑ   Yes, for some of them (13%)

    Ⓒ   No (79%)

27.   Did you receive continuing professional development credit (MSDE credit) for participating in these activities?

    Ⓐ   Yes (7%)

    Ⓑ   No (93%)

28. What was the **primary** focus of the coaching/mentoring activities? **(Choose one.)**

Ⓐ In-depth study of the academic content of the subject (or subjects) you teach (13%)

Ⓑ Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards (14%)

Ⓒ Using assessments to gauge student mastery of Maryland's content standards (2%)

Ⓓ Using research results for decision making (1%)

Ⓔ Collaboration for improving instruction (30%)

Ⓕ Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (14%)

Ⓖ Strategies for creating and maintaining safe and orderly classrooms and schools (8%)

Ⓗ Strategies for engaging families and other stakeholders as active members of school communities (2%)

Ⓘ Other (17%)

29. What **else** did these activities focus on? **(Choose all that apply.)**

Ⓐ In-depth study of the academic content of the subject (or subjects) you teach   (25%)

Ⓑ Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards   (35%)

Ⓒ Using assessments to gauge student mastery of Maryland's content standards (31%)

Ⓓ Using research results for decision making (14%)

Ⓔ Collaboration for improving instruction (43%)

Ⓕ Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (46%)

Ⓖ Strategies for creating and maintaining safe and orderly classrooms and schools (36%)

Ⓗ Strategies for engaging families and other stakeholders as active members of school communities (18%)

Ⓘ Other (20%)

30. Indicate your level of involvement in determining or shaping the following elements of the coaching or mentoring program. **(Darken one circle in each row.)**

	Very Involved	Involved	Seldom Involved	Not Involved
a. The content	Ⓨ (26%)	Ⓨ (34%)	Ⓨ (16%)	Ⓨ (24%)
b. The learning activities included in the program	Ⓨ (27%)	Ⓨ (34%)	Ⓨ (16%)	Ⓨ (23%)
c. The expectations for learning outcomes	Ⓨ (27%)	Ⓨ (35%)	Ⓨ (16%)	Ⓨ (23%)
d. Evaluation of the program as a professional learning opportunity	Ⓨ (26%)	Ⓨ (36%)	Ⓨ (15%)	Ⓨ (23%)

31. Reflecting on your experiences in the coaching or mentoring program, indicate how often they included each of the following activities focused on improving your professional knowledge and skills. **(Darken one circle in each row.)**

	Frequently	Sometimes	Seldom	Never
a. Clear explanations of key concepts and theories	(45%)	(36%)	(11%)	(9%)
b. Demonstrations of skills and strategies related to the key concepts and theories	(43%)	(36%)	(12%)	(9%)
c. Opportunities for you to practice skills and strategies, either as part of regular sessions or as assignments or projects	(46%)	(34%)	(11%)	(10%)
d. Feedback and assessment of your understanding of key concepts and theories	(43%)	(35%)	(13%)	(9%)
e. Feedback and assessment of your mastery of skills and strategies	(42%)	(35%)	(13%)	(11%)

Reflecting on your experiences in the coaching or mentoring program,, indicate how often the kinds of follow up listed below have occurred. **(Darken one circle in each row.)**

	Frequently	Sometimes	Seldom	Never
a. Ongoing opportunities for conversations with your colleagues	N/A	N/A	N/A	N/A
b. Explanation/presentations on content of the activity	N/A	N/A	N/A	N/A
c. Demonstrations of skills and strategies covered in the activity	N/A	N/A	N/A	N/A
d. Feedback and assessment of your mastery of skills and strategies covered in the activity	N/A	N/A	N/A	N/A

32. Reflecting on your experiences in the coaching or mentoring program, indicate how often they included each of the following activities online. **(Darken one circle in each row.)**

	Frequently	Sometimes	Seldom	Never
a. Presentation of content	(25%)	(26%)	(13%)	(36%)
b. Communication and collaboration among other participants in the coaching/mentoring program	(30%)	(26%)	(13%)	(32%)
c. Communication and feedback from the coach/mentor	(36%)	(26%)	(11%)	(28%)

33. Reflecting on your experiences in the coaching or mentoring program, indicate the extent to which you have benefited in each of the ways listed below. **(Darken one circle in each row.)**

	To a great extent	To some extent	To a limited extent	Not at all
a. Increased your knowledge of the subject (or subjects) you teach?	(31%)	(36%)	(17%)	(16%)
b. Enabled you to add academic rigor to your instruction?	(34%)	(38%)	(17%)	(12%)
c. Helped you provide more differentiated instruction for students' learning needs?	(37%)	(37%)	(16%)	(10%)
d. Helped you be more effective in working with your colleagues?	N/A	N/A	N/A	N/A
e. Helped you contribute more to your school's planned improvement efforts?	(30%)	(37%)	(18%)	(15%)

Section IV: Participation in Job-Embedded Professional Development Activities

Questions in this section ask about your participation in job-embedded professional development activities. These activities often take place during the regular school day or before or after school. Typically they involve working with colleagues from your school or from other schools, including school-based professional development staff (e.g., subject area resource teacher). Some examples of job-embedded professional development include:

- Teacher study groups
- Teacher networks
- Meetings of grade, subject, or department teams (excluding meetings that focus on routine administrative and operational issues and tasks)
- Collaboration on curriculum development or lesson planning
- Collaboration on reviewing student work

Note that job-embedded professional development as it is defined here does not include participation in coaching and mentoring programs included in the previous section of the survey.

34.   During the period July 1, 2003 to the present, did you participate in job-embedded professional development activities? **(Darken one circle.)**

Ⓐ   Yes (80%)

Ⓑ   No. **(Go to page 14, Section V, question 48.)** (20%)

35.   In general, how often do you participate in job-embedded professional development? **(Darken one circle.)**

Ⓐ   At least once a week (26%)

Ⓑ   Several times a month (25%)

Ⓒ   Once a month (25%)

Ⓓ   Less than once a month **(Go to page 14, Section V, question 48.)** (24%)

36.   Did you receive a stipend or other financial support for participating in these activities?

Ⓐ   Yes, for all of them (3%)

Ⓑ   Yes, for some of them   (17%)

Ⓒ   No (80%)

37.   Did you receive release time for participating in these activities?

Ⓐ   Yes, for all of them (11%)

Ⓑ   Yes, for some of them   (29%)

Ⓒ   No (61%)

38. Did you receive continuing professional development credit (MSDE credit) for participating in these activities?

    Ⓐ   Yes, for all of them (2%)

    Ⓑ   Yes, for some of them (8%)

    Ⓒ   No (91%)

39. Did these activities include support or assistance from a resource teacher, subject area lead teacher or coach, or someone in a similar role?

    Ⓐ   Yes (70%)

    Ⓑ   No (26%)

    Ⓒ   Other (4%)

40. Were these activities part of a candidate-support program for the certification from the National Board for Professional Teaching Standards?

    Ⓐ   Yes (4%)

    Ⓑ   No (96%)

41. What was the **primary** focus of these activities? **(Choose one.)**

    Ⓐ   In-depth study of the academic content of the subject (or subjects) you teach (15%)

    Ⓑ   Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards (16%)

    Ⓒ   Using assessments to gauge student mastery of Maryland's content standards (6%)

    Ⓓ   Using research results for decision making (2%)

    Ⓔ   Collaboration for improving instruction (35%)

    Ⓕ   Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (17%)

    Ⓖ   Strategies for creating and maintaining safe and orderly classrooms and schools (3%)

    Ⓗ   Strategies for engaging families and other stakeholders as active members of school communities (1%)

    Ⓘ   Other (5%)

42. What **else** did these activities focus on? **(Choose all that apply.)**

   Ⓐ In-depth study of the academic content of the subject (or subjects) you teach (30%)

   Ⓑ Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards (39%)

   Ⓒ Using assessments to gauge student mastery of Maryland's content standards (42%)

   Ⓓ Using research results for decision making (23%)

   Ⓔ Collaboration for improving instruction (49%)

   Ⓕ Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (53%)

   Ⓖ Strategies for creating and maintaining safe and orderly classrooms and schools (26%)

   Ⓗ Strategies for engaging families and other stakeholders as active members of school communities (21%)

   Ⓘ Other (10%)

43. Looking across all of the job-embedded professional development you reported above, indicate your level of involvement in determining or shaping the following course elements. **(Darken one circle in each row.)**

	Very Involved	Involved	Seldom Involved	Not Involved
a. The content	Ⓨ (28%)	Ⓨ (40%)	Ⓨ (17%)	Ⓨ (15%)
b. The learning activities	Ⓨ (27%)	Ⓨ (41%)	Ⓨ (17%)	Ⓨ (14%)
c. The expectations for learning outcomes	Ⓨ (25%)	Ⓨ (41%)	Ⓨ (18%)	Ⓨ (15%)
d. Evaluation of the activities as a professional learning opportunity	Ⓨ (24%)	Ⓨ (44%)	Ⓨ (17%)	Ⓨ (15%)

44. Looking across all of the job-embedded professional development you reported above, indicate how often they included each of the following activities focused on improving your professional knowledge and skills. **(Darken one circle in each row.)**

	Frequently	Sometimes	Seldom	Never
a. Clear explanations of key concepts and theories	Ⓨ (49%)	Ⓨ (42%)	Ⓨ (7%)	Ⓨ (2%)
b. Demonstrations of skills and strategies related to the key concepts and theories	Ⓨ (44%)	Ⓨ (45%)	Ⓨ (9%)	Ⓨ (3%)
c. Opportunities for you to practice skills and strategies, either as part of regular sessions or as assignments or projects	Ⓨ (42%)	Ⓨ (42%)	Ⓨ (12%)	Ⓨ (4%)
d. Feedback and assessment of your understanding of key concepts and theories	Ⓨ (33%)	Ⓨ (46%)	Ⓨ (15%)	Ⓨ (7%)
e. Feedback and assessment of your mastery of skills and strategies	Ⓨ (28%)	Ⓨ (45%)	Ⓨ (18%)	Ⓨ (9%)

45. Looking across all of the job-embedded professional development you reported above, indicate how often the kinds of follow up listed below have occurred, including follow up provided by college or university faculty, a district or school administrator, a peer coach or mentor, or an external provider. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Ongoing opportunities for conversations with your colleagues	Y (56%)	Y (33%)	Y (8%)	Y (2%)
b.	Explanation/presentations on content	Y (35%)	Y (46%)	Y (14%)	Y (5%)
c.	Demonstrations of skills and strategies covered in these activities	Y (31%)	Y (47%)	Y (16%)	Y (6%)
d.	Opportunities for you to practice skills and knowledge covered in these activities	Y (39%)	Y (44%)	Y (13%)	Y (5%)
e.	Feedback and assessment of your mastery of skills and strategies covered in these activities	Y (25%)	Y (44%)	Y (21%)	Y (10%)

46. Looking across all of the job-embedded professional development you reported above, indicate how often the courses included each of the following activities online. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Presentation of content	Y (24%)	Y (29%)	Y (13%)	Y (34%)
b.	Communication and collaboration among participants	Y (31%)	Y (29%)	Y (12%)	Y (29%)
c.	Communication and feedback from the leader/facilitator	Y (25%)	Y (31%)	Y (14%)	Y (30%)

47. Looking across all of the job-embedded professional development you reported above, indicate how much you have benefited in each of the ways listed below. **(Darken one circle in each row.)**

Has participation in these activities:		To a great extent	To some extent	To a limited extent	Not at all
a.	Increased your knowledge of the subject (or subjects) you teach?	Y (28%)	Y (49%)	Y (16%)	Y (7%)
b.	Enabled you to add academic rigor to your instruction?	Y (29%)	Y (49%)	Y (17%)	Y (6%)
c.	Helped you provide more differentiated instruction for students' learning needs?	Y (33%)	Y (47%)	Y (15%)	Y (4%)
d.	Helped you be more effective in working with your colleagues?	N/A	N/A	N/A	N/A
e.	Helped you contribute more to your school's planned improvement efforts?	Y (31%)	Y (46%)	Y (17%)	Y (6%)

Section V: Attendance at Conferences or Professional Meetings

Questions in this section ask about your attendance at conferences and professional meetings. These include events such as annual meetings of professional associations or other organizations, as well as special purpose events that may occur only once. In many cases, these events will take place out of the district or perhaps even outside of Maryland.

During the period July 1, 2003 to the present, did you attend one or more conferences or professional meetings?

48.   During the period July 1, 2003 to the present, did you attend one or more conferences or professional meetings? **(Darken one circle.)**

    ⓐ   Yes (42%)

    ⓑ   No. **(Go to page 17, Section VI, Question 60.)** (58%)

49.   Indicate the number of conferences and meetings in which your participation lasted a day or longer.

    ⓐ   None **(Go to page 17, Section VI, Question 60.)** (12%)

    ⓑ   1 (40%)

    ⓒ   2 (25%)

    ⓓ   3 (11%)

    ⓔ   4 or more (13%)

50.   What portion of the costs associated with your participation in the conferences or meetings you reported above were you reimbursed for?

    ⓐ   All (31%)

    ⓑ   Some (25%)

    ⓒ   None (44%)

51.   Did you receive release time for participating in these activities?

    ⓐ   Yes, for all of them (50%)

    ⓑ   Yes, for some of them (22%)

    ⓒ   No (29%)

52.   Did you receive continuing professional development credit (MSDE credit) for participating in these activities?

    ⓐ   Yes, for all of them (7%)

    ⓑ   Yes, for some of them (12%)

    ⓒ   No (81%)

53.   What was the **primary** focus or theme of the conference or meeting agenda? **(Choose one.)**

Ⓐ   In-depth study of the academic content of the subject (or subjects) you teach (32%)

Ⓑ   Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards (12%)

Ⓒ   Using assessments to gauge student mastery of Maryland's content standards (4%)

Ⓓ   Using research results for decision making (4%)

Ⓔ   Collaboration for improving instruction (14%)

Ⓕ   Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (18%)

Ⓖ   Strategies for creating and maintaining safe and orderly classrooms and schools (3%)

Ⓗ   Strategies for engaging families and other stakeholders as active members of school communities (2%)

Ⓘ   Other (12%)

54.   What **else** did the conference or meeting agenda focus on? **(Choose all that apply.)**

Ⓐ   In-depth study of the academic content of the subject (or subjects) you teach (26%)

Ⓑ   Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards (30%)

Ⓒ   Using assessments to gauge student mastery of Maryland's content standards (27%)

Ⓓ   Using research results for decision making (25%)

Ⓔ   Collaboration for improving instruction (43%)

Ⓕ   Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles (41%)

Ⓖ   Strategies for creating and maintaining safe and orderly classrooms and schools (19%)

Ⓗ   Strategies for engaging families and other stakeholders as active members of school communities (19%)

Ⓘ   Other (18%)

55.   Looking across the conferences and professional meetings you reported above, indicate your level of involvement in determining or shaping the following elements. **(Darken one circle in each row.)**

	Very Involved	Involved	Seldom Involved	Not Involved
a. The content	Ⓨ (18%)	Ⓨ (28%)	Ⓨ (16%)	Ⓨ (38%)
b. The learning activities included in the conference or meeting	Ⓨ (18%)	Ⓨ (30%)	Ⓨ (17%)	Ⓨ (35%)
c. The expectations for learning outcomes	Ⓨ (17%)	Ⓨ (30%)	Ⓨ (17%)	Ⓨ (36%)
d. Evaluation of the conference or meeting as a professional learning opportunity	Ⓨ (23%)	Ⓨ (42%)	Ⓨ (14%)	Ⓨ (22%)

56. Looking across all the conferences and meetings you reported above, indicate how often they included each of the following activities focused on improving your professional knowledge and skills. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Clear explanations of key concepts and theories	Y (54%)	Y (40%)	Y (5%)	Y (2%)
b.	Demonstrations of skills and strategies related to the key concepts and theories	Y (50%)	Y (41%)	Y (6%)	Y (2%)
c.	Opportunities for you to practice skills and strategies, either as part of meeting or conference sessions or as assignments or projects	Y (36%)	Y (43%)	Y (15%)	Y (7%)
d.	Feedback and assessment of your understanding of key concepts and theories	Y (30%)	Y (42%)	Y (18%)	Y (11%)
e.	Feedback and assessment of your mastery of skills and strategies	Y (26%)	Y (39%)	Y (21%)	Y (15%)

57. Looking across all the conferences and professional meetings you reported above, indicate how often the kinds of follow up listed below have occurred, including follow up provided by college or university faculty, a district or school administrator, a peer coach or mentor, or an external provider. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Ongoing opportunities for conversations with your colleagues	Y (34%)	Y (43%)	Y (15%)	Y (8%)
b.	Explanation/presentations on conference/meeting content	Y (28%)	Y (42%)	Y (17%)	Y (12%)
c.	Demonstrations of skills and strategies covered in the conference/meeting	Y (27%)	Y (43%)	Y (17%)	Y (13%)
d.	Opportunities for you to practice skills and strategies covered in the conference/meeting	Y (29%)	Y (44%)	Y (16%)	Y (11%)
e.	Feedback and assessment of your mastery of skills and strategies covered in the conference/meeting	Y (20%)	Y (39%)	Y (22%)	Y (19%)

58. Looking across all the conferences and professional meetings you reported above, indicate how often the courses included each of the following activities online. **(Darken one circle in each row.)**

		Frequently	Sometimes	Seldom	Never
a.	Presentation of content	Y (28%)	Y (27%)	Y (11%)	Y (34%)
b.	Communication and collaboration among participants	Y (25%)	Y (32%)	Y (12%)	Y (32%)
c.	Communication and feedback from the leader/facilitator	Y (20%)	Y (32%)	Y (14%)	Y (34%)

59. Looking across all the conferences and professional meetings you reported above, indicate how much you have benefited in each of the ways listed below. **(Darken one circle in each row.)**

Has participation in these activities:	To a great extent	To some extent	To a limited extent	Not at all
a. Increased your knowledge of the subject (or subjects) you teach?	Ⓨ (35%)	Ⓨ (47%)	Ⓨ (12%)	Ⓨ (6%)
b. Enabled you to add academic rigor to your instruction?	Ⓨ (31%)	Ⓨ (46%)	Ⓨ (16%)	Ⓨ (7%)
c. Helped you provide more differentiated instruction for students' learning needs?	Ⓨ (33%)	Ⓨ (46%)	Ⓨ (15%)	Ⓨ (6%)
d. Helped you be more effective in working with your colleagues?	N/A	N/A	N/A	N/A
e. Helped you contribute more to your school's planned improvement efforts?	Ⓨ (28%)	Ⓨ (45%)	Ⓨ (19%)	Ⓨ (9%)

Section VI: Summing Up and Looking Ahead

Looking across the professional development activities that you have participated in during the period July 1, 2003 to the present, indicate the extent to which you agree or disagree with the following statements. **(If you have not participated in any professional development activities during the period July 2003 to the present, please skip to Question 63 on the next page.)**

60.   Together, these activities communicated clear and consistent messages about expectations for my role as a teacher. **(Darken one circle.)**

- Ⓐ   Strongly agree (20%)
- Ⓑ   Agree (54%)
- Ⓒ   Neither agree nor disagree (19%)
- Ⓓ   Disagree (6%)
- Ⓔ   Strongly disagree (2%)

61.   Together, these activities helped me learn how to meet these expectations in working with my students. **(Darken one circle.)**

- Ⓐ   Strongly agree (17%)
- Ⓑ   Agree (56%)
- Ⓒ   Neither agree nor disagree (20%)
- Ⓓ   Disagree (7%)
- Ⓔ   Strongly disagree (2%)

62.   Reflecting on the current school year, indicate how often each of the following statements are true.

When I try to implement the strategies that I learned in the professional development I reported above:
(Darken one circle in each row.)

	Always	Sometimes	Seldom	Never
a. I have the curriculum materials I need.	Ⓨ (29%)	Ⓨ (57%)	Ⓨ (11%)	Ⓨ (3%)
b. I have the instructional supplies and equipment I need.	Ⓨ (23%)	Ⓨ (59%)	Ⓨ (15%)	Ⓨ (3%)
c. There is someone in my school who can give me sound advice.	Ⓨ (43%)	Ⓨ (42%)	Ⓨ (12%)	Ⓨ (3%)

63. How high a priority is each of the following topics to you for your continued professional development? **(Darken one circle in each row.)**

	Very high priority	High priority	Low priority	Not a priority at all
a. In-depth study of the academic content of the subject (or subjects) you teach	Ⓨ (43%)	Ⓨ (42%)	Ⓨ (13%)	Ⓨ (3%)
b. Understanding Maryland content standards and applying research-based instructional strategies to helping students master the Maryland content standards	Ⓨ (35%)	Ⓨ (49%)	Ⓨ (13%)	Ⓨ (3%)
c. Using assessments to gauge student mastery of Maryland's content standards	Ⓨ (34%)	Ⓨ (48%)	Ⓨ (15%)	Ⓨ (3%)
d. Using research results for decision making	Ⓨ (24%)	Ⓨ (46%)	Ⓨ (26%)	Ⓨ (5%)
e. Collaboration for improving instruction	Ⓨ (54%)	Ⓨ (38%)	Ⓨ (7%)	Ⓨ (1%)
f. Instructional strategies to meet the learning needs of diverse groups of students and/or students with different learning styles	Ⓨ (57%)	Ⓨ (36%)	Ⓨ (6%)	Ⓨ (1%)
g. Strategies for creating and maintaining safe and orderly classrooms and schools	Ⓨ (43%)	Ⓨ (38%)	Ⓨ (15%)	Ⓨ (4%)
h. Strategies for engaging families and other stakeholders as active members of school communities	Ⓨ (34%)	Ⓨ (44%)	Ⓨ (18%)	Ⓨ (4%)
i. Other	Ⓨ (27%)	Ⓨ (32%)	Ⓨ (13%)	Ⓨ (28%)

Section VII: Teaching Experience with Current Teaching Assignments

64.   How many years have you been a teacher (including all of your teaching positions)?

Ⓐ   Less than a year (3%)

Ⓑ   1-3 years (10%)

Ⓒ   4-10 years (31%)

Ⓓ   More than 10 years (56%)

65.   How many years have you been a teacher in the school to which you are currently assigned?

Ⓐ   Less than a year (11%)

Ⓑ   1-3 years (25%)

Ⓒ   4-10 years (38%)

Ⓓ   More than 10 years (26%)

66.   What type of certification do you have? **(Darken one circle.)**

Ⓐ   Professional Eligibility Certificate ($<1\%$)

Ⓑ   Standard Professional Certificate I (15%)

Ⓒ   Standard Professional Certificate II (15%)

Ⓓ   Advanced Professional Certificate (62%)

Ⓔ   Resident Teacher Certificate ($<1\%$)

Ⓕ   Provisional Certificate (7%)

67.   Have you received certification from the National Board for Professional Teaching Standards?

Ⓐ   Yes (12%)

Ⓑ   No (88%)

68.   How many of the students that you teach are in the following subgroups? **(Darken one circle in each row.)**

	All	More Than Half	Less Than Half	None
a. Students with an Individual Education Program (IEP)	Ⓨ (11%)	Ⓨ (6%)	Ⓨ (74%)	Ⓨ (10%)
b. Students identified as Limited English Proficient (LEP) or as speakers of English as a Second Language (ESOL)	Ⓨ (2%)	Ⓨ (3%)	Ⓨ (43%)	Ⓨ (53%)
c. Students identified as Gifted and Talented (GT)	Ⓨ (1%)	Ⓨ (10%)	Ⓨ (47%)	Ⓨ (42%)

69. What is the **primary** content area of your current teaching assignment? **(Choose one.)**

Ⓐ   I am a pre-school teacher **N/A**

Ⓑ   I am an elementary school teacher assigned to teach multiple subjects (33%)

Ⓒ   English language arts/Reading (12%)

Ⓓ   Mathematics (9%)

Ⓔ   Social studies (6%)

Ⓕ   Science (7%)

Ⓖ   Special education (11%)

Ⓗ   Other (e.g., foreign languages, visual and performing arts, health and physical education, family and consumer sciences, career and technology education, library media) (22%)

Thank you very much for taking the time to complete this survey!

Please seal your completed survey in the accompanying envelope and return it to your school principal. Do not mail the survey to the district, MSDE, or the survey team.

Appendix B

Content of Professional Development by Grade Level of Teaching Assignment

Exhibit B1
Primary Content Focus of Professional Development
for Elementary School Teachers, by Category

	Workshops, Institutes, or Academies	Coaching or Mentoring Program	Job-Embedded Professional Development	Conferences or Professional Meetings
Study of the academic content of the subject(s) taught	29	14	17	35
Understanding Maryland content standards	14	17	16	12
Using assessments to gauge student mastery	4	2	7	3
Using research results for decision making	2	1	2	4
Collaboration for improving instruction	12	28	35	11
Meeting the learning needs of diverse groups	27	16	16	21
Maintaining safe and orderly classrooms and schools	2	5	1	3
Engaging families and other stakeholders	1	1	1	2
Other	9	15	4	9

Exhibit reads: An estimated 29 percent of elementary school teachers who reported participating in workshops, institutes, or academies reported that the primary focus of the activities was in-depth study of the academic content of the subject (or subjects) taught.

Source: Questions 16, 28, 41, 53, and school-level data provided by MSDE.

Exhibit B2
Primary Content Focus of Professional Development
for Middle School Teachers, by Category

	Workshops, Institutes, or Academies	Coaching or Mentoring Program	Job-Embedded Professional Development	Conferences or Professional Meetings
Study of the academic content of the subject(s) taught	21	9	11	29
Understanding Maryland content standards	16	14	18	15
Using assessments to gauge student mastery	4	2	5	5
Using research results for decision making	2	1	2	3
Collaboration for improving instruction	14	31	33	13
Meeting the learning needs of diverse groups	25	14	20	17
Maintaining safe and orderly classrooms and schools	4	11	5	4
Engaging families and other stakeholders	1	1	1	2
Other	12	18	6	12

Exhibit reads: An estimated 21 percent of middle school teachers who reported participating in workshops, institutes, or academies reported that the primary focus of the activities was in-depth study of the academic content of the subject (or subjects) taught.

Source: Questions 16, 28, 41, 53 and school-level data provided by MSDE.

Exhibit B3
Primary Content Focus of Professional Development
for High School Teachers, by Category

	Workshops, Institutes, or Academies	Coaching or Mentoring Program	Job-Embedded Professional Development	Conferences or Professional Meetings
Study of the academic content of the subject(s) taught	26	12	12	31
Understanding Maryland content standards	11	10	11	9
Using assessments to gauge student mastery	5	3	5	4
Using research results for decision making	2	1	2	3
Collaboration for improving instruction	16	30	39	17
Meeting the learning needs of diverse groups	22	12	18	16
Maintaining safe and orderly classrooms and schools	3	9	4	3
Engaging families and other stakeholders	1	2	2	2
Other	13	20	7	15

Exhibit reads: An estimated 26 percent of high school teachers who reported participating in workshops, institutes, or academies reported that the primary focus of the activities was in-depth study of the academic content of the subject (or subjects) taught.

Source: Questions 16, 28, 41, 53, and school-level data provided by MSDE.

Appendix C

Participation in High-Quality Professional Development by Teachers' Grade Level

Exhibit C1
Participation in High-Quality Professional Development,
by Grade Level and Category

	Grade Level		
	Elementary School	Middle School	High School
Graduate courses	34	28	25
Workshops, institutes, or academies	31	28	28
Coaching or mentoring program	45	38	39
Job-embedded professional development activities	44	35	33
Conferences or professional meetings	30	29	28

Exhibit reads: An estimated 34 percent of elementary school teachers who reported participating in one or more graduate course(s) reported that the graduate course(s) was of high quality.

Source: Questions on quality indicators and school-level data provided by MSDE.

Exhibit C2
Teacher Experience That Met Maryland's Criteria for High Quality:
Graduate Courses, by Grade Level

	Grade Level		
	Elementary School	Middle School	High School
Involvement in planning and decision making	62	61	57
Participation in activities focused on improving professional knowledge and skill	89	88	84
Follow up	71	70	65
Benefits	59	46	40

Exhibit reads: An estimated 62 percent of elementary school teachers who reported participating in one or more graduate course(s) reported involvement in planning and decision making in the course(s) that met Maryland's criteria for high quality.

Source: Questions 6, 7, 8, 10 and school-level data provided by MSDE.

Exhibit C3
Teacher Experience That Met Maryland's Criteria for High Quality:
Workshops, Institutes, and Academies, by Grade Level

	Grade Level		
	Elementary School	Middle School	High School
Involvement in planning and decision making	55	59	62
Participation in activities focused on improving professional knowledge and skill	71	72	70
Follow up	57	57	56
Benefits	61	50	47

Exhibit reads: An estimated 55 percent of elementary school teachers who reported participating in workshops, institutes, or academies reported involvement in planning and decision making in the activities that met Maryland's criteria for high quality.

Source: Question 18, 19, 20, 22 and school-level data provided by MSDE.

Exhibit C4
Teacher Experience That Met Maryland's Criteria for High Quality:
Coaching or Mentoring Programs, by Grade Level

	Grade Level		
	Elementary School	Middle School	High School
Involvement in planning and decision making	63	62	68
Participation in activities focused on improving professional knowledge and skill	67	66	72
Benefits	61	52	49

Exhibit reads: An estimated 63 percent of elementary school teachers who reported participating in a coaching or mentoring program reported involvement in planning and decision making in the activities that met Maryland's criteria for high quality.

Source: Questions 30, 31, 33 and school-level data provided by MSDE.

Exhibit C5
Teacher Experience That Met Maryland's Criteria for High Quality:
Job-Embedded Professional Development, by Grade Level

	Grade Level		
	Elementary School	Middle School	High School
Involvement in planning and decision making	72	69	72
Participation in activities focused on improving professional knowledge and skill	71	66	64
Follow up	65	61	57
Benefits	71	55	51

Exhibit reads: An estimated 72 percent of elementary school teachers who reported participating in job-embedded professional development reported involvement in planning and decision making in the activities that met Maryland's criteria for high quality.

Source: Questions 43, 44, 45, 47, and school-level data provided by MSDE.

Exhibit C6
Teacher Experience That Met Maryland's Criteria for High Quality:
Conferences or Professional Meetings, by Grade Level

	Grade Level		
	Elementary School	Middle School	High School
Involvement in planning and decision making	49	53	51
Activities focused on improving professional knowledge and skill	61	62	62
Follow up	55	52	53
Benefits	68	59	53

Exhibit reads: An estimated 49 percent of elementary school teachers who reported participating in conferences or professional meetings reported involvement in planning and decision making in the activities that met Maryland's criteria for high quality.

Source: Questions 55, 56, 57, 59 and school-level data provided by MSDE.

Appendix D

Use of Online Technology in Five Categories of Professional Development

Exhibit D1
Use of Online Technology in Professional Development:
Graduate Courses

	Frequently/Sometimes	Seldom/Never
Presentation of the content	69	31
Communication and collaboration among students	71	29
Communication and feedback from the instructor	76	24

Exhibit reads: An estimated 69 percent of teachers who reported participating in one or more graduate course(s) reported that their activities frequently or sometimes included the presentation of the content online.

Source: Question 9.

Exhibit D2
Use of Online Technology in Professional Development:
Workshops, Institutes, or Academies

	Frequently/Sometimes	Seldom/Never
Presentation of the content	53	47
Communication and collaboration among participants	57	43
Communication and feedback from the presenter/leader/facilitator	56	44

Exhibit reads: An estimated 53 percent of teachers who reported participating in workshops, institutes, or academies reported that their activities frequently or sometimes included the presentation of the content online.

Source: Question 21.

Exhibit D3
Use of Online Technology in Professional Development:
Coaching or Mentoring Programs

	Frequently/Sometimes	Seldom/Never
Presentation of the content	51	49
Communication and collaboration among other participants in the coaching/mentoring program	55	45
Communication and feedback from the coach/mentor	62	38

Exhibit reads: An estimated 51 percent of teachers who reported participating in a coaching or mentoring program reported that their activities frequently or sometimes included the presentation of the content online.

Source: Question 32.

Exhibit D4
Use of Online Technology in Professional Development:
Job-Embedded Professional Development

	Frequently/Sometimes	Seldom/Never
Presentation of the content	52	48
Communication and collaboration among participants	59	41
Communication and feedback from the leader/facilitator	56	44

Exhibit reads: An estimated 52 percent of teachers who reported participating in job-embedded professional development reported that their activities frequently or sometimes included the presentation of the content online.

Source: Question 46.

Exhibit D5
Use of Online Technology in Professional Development:
Conferences or Professional Meetings

	Frequently/Sometimes	Seldom/Never
Presentation of the content	55	45
Communication and collaboration among participants	56	44
Communication and feedback from the leader/facilitator	52	48

Exhibit reads: An estimated 55 percent of teachers who reported participating in conferences or professional meetings reported that their activities frequently or sometimes included the presentation of the content online.

Source: Question 58.

Appendix E

Technical Appendix

Technical Appendix

The introduction to this report discusses survey design and administration and the development of the quality indicators. This technical appendix explains several features and issues of the research methods that are more technical in nature: case weights, representativeness of the sample, construction of the high-quality indicators, and analysis procedures.

Case Weights

Weighting Procedures

Of the approximately 55,000 teachers in Maryland, just over 30,000 completed surveys, or about 55 percent of all teachers in the state. Since not all teachers responded to the survey, it was necessary to develop a procedure to account for non-respondents so that we could estimate overall response rates at the state and district levels. Specifically, we developed teacher-level case weights to adjust for discrepancies between known statewide distributions of teacher characteristics and the distribution of the same characteristics in the sample of teachers responding to the survey.[1] When applied, the weights thus produce a statistically representative sample of teachers in Maryland.

Development of the weights was a two-stage process. The first stage involved setting up between-school weights, and the second stage involved setting up within-school weights. Stage one produced between-school weights so that data for each district are representative of that district, according to school-level data provided to us by the Maryland State Department of Education (MSDE). The basic formula for these weights is:

$$w = p_p/p_s \qquad \text{(Equation 1)}$$

where w is the case weight,
p_p is the population proportion, and
p_s is the sample proportion.

The population proportion, p_p, was determined by dividing the known population number of teachers in a school, as reported by MSDE, by the total known population number of teachers in the respective district, as reported by MSDE. The sample proportion, p_s, was determined by dividing the number of teachers responding to the survey in a school by the total number of teachers responding in the respective district. The division of the population proportion, p_p, by the sample proportion, p_s – as shown in Equation 3.1 above – thus produces a between-school

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[1] Dr. Gary Henry, Professor of Public Policy in the Andrew Young School of Public Policy at Georgia State University and a nationally recognized sampling statistician, served as a consultant to this phase of our work. Dr. Henry guided the development of weighting procedure we discuss here.

weight for each school across Maryland.[2] In effect, the weights produced in this procedure give heavier weights to schools whose representation in the survey responses is lower than their known representation in the respective district. Conversely, the weighting procedure also gives lower weights to schools that are overrepresented in the survey responses, compared to their known representation in their districts.[3] The combined goal of these two effects of weighting is to even out each case's representation in the database – representation in terms of numbers of teachers in each school – to approximate the representation that case would have had if we had been able to obtain completed surveys from all teachers in the state. For the between-school weights, this means that a school that in reality employs 4 percent of all teachers in the state, but only accounts for 2 percent of the cases in the database, will have a weight of 2 because those teachers in the 2 percent must represent all teachers in the 4 percent. The between-school weights thus produce estimates from the survey responses that approximate the known population distribution of teachers in schools within districts.

The second stage of weight development was to produce within-school weights based on the known and sampled distributions of teachers across years of teaching experience and across categories of certification status. This stage followed a process similar to the first stage, using Equation C1 and dividing the known population distribution by the sampled response distribution for each category of teacher characteristics, within each school. In this second stage, however, there was an additional level of categorization, teacher characteristics. Here, the population proportion, p_p, was determined by dividing the known population number of teachers with a particular characteristic at a particular school, as reported by MSDE, by the total known population number of teachers with that characteristic in the state. The sample proportion, p_s, was determined by dividing the number of responding teachers with that characteristic in that school, weighted on the stage one between-school weight, by the total number of responding teachers with that characteristic in the state. The division of the population proportion, p_p, by the sample proportion, p_s – as shown in Equation 3.1 above – thus produces a within-school weight for each category of teacher characteristics across Maryland. In effect, the weights produced in this stage give heavier weights to teacher categories that are underrepresented in the survey responses and lower weights to teacher categories that are overrepresented in the survey responses. As with the between-school weights, the combined effect of the within-school weighting adjustments is to even out each case's representation in the database so as to approximate the representation that case would have had if we had been able to survey all teachers in the state. The within-school weight thus serves to produce estimates from the survey responses that approximate the known population distribution of teachers across teacher characteristic categories.

The teacher characteristics that we included in the weighting procedure were years of teaching experience and type of certification. At the time we set up weights, MSDE had not provided a state-level cross-tabulation of teachers' years of experience by type of certification. This information would have been necessary (as a component of the population proportion) in order to develop within-school weights that simultaneously accounted for years of experience

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[2] This weighting procedure is akin to "post-stratification" weighting as described in Henry, G.T. (1990). *Practical Sampling*. Newbury Park, CA: Sage. Pp. 130-131. Though our sampling design did not involve any stratification, this was the weighting procedure recommended by Dr. Henry (personal communication).
[3] Under- or over-representation is due to differential response rates across districts.

and type of certification. Since this information was not available at the time, we developed within-school weights serially. That is, we first developed a within-school weight accounting for teaching experience, using the procedure described in the previous paragraph. We then repeated the steps in order to account for type of certification, but weighted on the experience-based within-school weight when producing the sample proportion component of the weight. The weight produced in this second step of the second stage was then used as the final weight for all analyses.

Weighting Issues

Several issues arose when developing weights for the data. These issues are commonly encountered in weighting procedures and are not peculiar to this survey or this dataset. The issues are outlined here simply in order to explain the steps we took and the decisions we made in addressing each issue.

The first set of issues was the matter of data availability. For 12 out of the approximately 1,400 schools in Maryland, we did not have sufficient information to calculate the population proportion component of the weights. That is, the school-level data file obtained from MSDE did not provide information on number of teachers, or number of teachers in the categories of certification and years of experience for these 12 schools. Thus, these 12 schools, and the teacher surveys from them, did not receive any weights and are omitted from any analyses using weights.[4] This omission is necessary because of a limitation of the weighting procedure, rather than the result of any particular decision we made for handling these 12 schools this way.

For other schools, there was a clear discrepancy between state-reported teacher characteristics and teacher-reported characteristics. Consider the following example:

> *Example:*
> The state reported that a school had no teachers in a characteristic
> category, such as 0-3 years of experience, but in some surveys teachers
> from that school reported 0-3 years of experience.

In cases where the discrepancy involved ten versus three teachers, or any other combination of numbers greater than 0, then the weighting procedure appropriately adjusts for the misrepresentation in the survey responses. However, if the state-reported proportion of teachers in that category (the numerator of the weight calculation) is zero, the calculated weight comes out to be zero, and cases with weights of zero cannot be included in analyses – it is a procedural impossibility. We investigated the extent of discrepancies of this nature. There did not seem to be any identifiable pattern to the discrepancies to guide us in dealing with them. Furthermore, very few cases were lost due to these discrepancies.[5] For these two reasons, we decided to allow

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[4] The 12 schools missing these data involved 108 teacher surveys. This is less than 0.01 percent of the approximately 30,000 teacher surveys completed.

[5] The discrepancy described here accounted for case losses of 651 teacher surveys, or approximately 2.2 percent of the 30,000 surveys completed.

these cases to drop out of analyses rather than arbitrarily assigning some other, non-calculated weight to those cases.

Other situations showed the reverse pattern: the state reported that a school had one or more teachers in a characteristic category, but no surveys were completed from that school by teachers reporting to be in that category. Discrepancies of this nature are critical because when no teachers from a category respond to the survey, there are no data upon which to base population estimates, and therefore nothing to be weighted up or weighted down. This category simply remains unrepresented in the data. Unfortunately, there is no way to 'handle' this situation. It is simply a case of missing data. It must be acknowledged as a limitation to the representativeness of the sample, and there is no way to 'correct' for it. For these data, the limitation is strongest at the school level, where some schools did not have respondents from particular categories. However, at the district level, all categories of teacher characteristics were represented and could thus be weighted appropriately. The data are therefore limited to district- or state-level analyses and are not suitable for school-level analyses.[6]

There was also the issue of data availability at the teacher level. If a teacher did not complete the questions regarding his or her teaching experience or certification level, we could not assign that teacher to a category for weighting. These cases, therefore, drop out of analyses for lack of weights. This situation accounted for the greatest loss of cases, involving 1,485 teacher surveys.

Representativeness of the Sample

The case weights were developed to produce a survey sample of teachers that would be representative of teachers in Maryland, and within individual counties, in terms of years of teaching experience, certification status, and grade span served by a teacher's school. The possibility remains, however, that teachers in the survey sample differ from other teachers in the state on some unmeasured characteristic. For reasons of confidentiality, it was not possible to draw a random sample or to conduct follow ups with survey recipients to improve response rates. This means the sample of teachers who completed the survey is probably different in some way from the sample who did not participate. For example, since completing the survey was voluntary, perhaps only the most dedicated teachers were inspired to participate, or only the teachers with enough time to participate. Also, since the survey topic was explicitly stated as professional development, perhaps teachers who had not participated in professional development or who had had poor professional development experiences felt that the survey was not relevant to them and did not participate. However, it is probable that similar types and rates of self-selection operated in each district, and thus comparisons between districts are still meaningful.

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[6] In addition to the issue of representativeness, school-level analyses are not possible because school-level samples of teachers are too small to permit reliable statistical analysis.

Using Survey Data to Track Teacher Participation in High-Quality Professional Development

In the introduction to the report, we described how the data-based definition of high quality was developed. Here, we provide for interested readers a few more details on that process. To review, teachers were counted as having participated in high-quality professional development in one or more of the five categories of professional development if their responses to questions about each of the indicators reflected the following patterns (Exhibit E1 reproduces Exhibit 2 from the introduction to the report):

■ They had to report being "very involved" or "somewhat involved" in *any two of the four* activities and decisions included in questions about *planning and decision making* in each category of professional development; **and**

■ They had to report that the professional development "frequently" or "sometimes" included *each of the five learning activities specified in survey questions about the learning opportunities*; **and**

■ They had to report that follow up "frequently" or "sometimes" included *each of the four activities specified in survey questions about follow up*; **and**

■ They had to report that they benefited "to a great extent" or "to some extent" in *each of the four areas specified in questions about benefits.*

In other words, teachers had to report the presence of 15 of the 17 quality indicators specified in Maryland's criteria in order to be counted as participating in high-quality professional development.

In a few cases, with the last three clusters of items, teachers failed to respond to every item in a given set. Consider this example:

> *Example:*
> If a teacher omitted a response for explanations of key concepts and theories under learning opportunities, that teacher would not have valid responses for all five of the five learning activities.

Under a strict "all five of five" definition, we would have been forced to identify such cases of missing data as either NOT meeting the criteria for high quality, or as missing sufficient data and losing the case for subsequent analyses. In order not to penalize respondents and not to lose cases in these situations, we allowed the rule to vary by "all X of X," where X represents the

Exhibit E1
Using Survey Data to Define High-Quality Professional Development

PLANNING AND DECISION MAKING				
Indicators:	**Very Involved**	**Involved**	**Seldom Involved**	**Not Involved**
■ Determine content	☐ Or	☐		
■ Determine learning activities				
■ Set expectations for outcomes	☐ Or	☐		
■ Participate in evaluation of course as professional learning				

LEARNING OPPORTUNITIES				
Indicators:	**Frequently**	**Sometimes**	**Seldom**	**Never**
■ Explanations of key concepts and theories	☐ Or	☐		
■ Demonstrations of skills and strategies	☐ Or	☐		
■ Opportunities to practice skills and strategies	☐ Or	☐		
■ Feedback and assessment of understanding of key concepts and theories	☐ Or	☐		
■ Feedback and assessment of mastery of skills and strategies	☐ Or	☐		

FOLLOW UP				
Indicators:	**Frequently**	**Sometimes**	**Seldom**	**Never**
■ Ongoing opportunities for conversations	☐ Or	☐		
■ Explanations/presentations	☐ Or	☐		
■ Demonstrations of skills and strategies	☐ Or	☐		
■ Feedback and assessment on mastery of skills and strategies	☐ Or	☐		

BENEFITS				
Indicators:	**Great Extent**	**Some Extent**	**Limited Extent**	**Not at All**
■ Increased knowledge of subject(s)	☐ Or	☐		
■ Increased academic rigor in instruction	☐ Or	☐		
■ More differentiated instruction	☐ Or	☐		
■ Increased ability to contribute to planned improvement efforts	☐ Or	☐		

number of items for which the survey participant provided valid responses. In our example here, if the teacher had indicated "frequently" or "sometimes" for all four of the four items he or she addressed, then that teacher would be deemed to have participated in high-quality professional development. We allowed the number of items addressed, X, to range from the full number available (i.e., 5 for learning opportunities, 4 for follow up, and 4 for benefits), to as low as 1.

There were very few cases where teachers provided fewer than the full set of possible answers (e.g., only 4 of 5, only 3 of 5). Table 3.2 shows the distribution of cases across configurations of possible answers:

Exhibit E2
Number of Teachers Reporting Participation in High-Quality Professional Development, by Type of Professional Development, Cluster of Items, and Number of Cluster Items with Valid Responses

Number of Items with Valid Responses	Graduate Courses	Workshops, Institutes, and Academies	Coaching or Mentoring Programs	Job-Embedded Professional Development	Conferences or Professional Meetings
Learning Opportunities					
All 5 of 5 items	2,766	5,754	1,598	6,301	2,847
Only 4 of 5 items	95	158	64	269	143
Only 3 of 5 items	19	39	11	40	21
Only 2 of 5 items	13	25	3	14	6
Only 1 of 5 items	3	7	2	5	6
Follow Up					
All 4 of 4 items	2,799	5,786		6,443	2,892
Only 3 of 4 items	71	148		154	110
Only 2 of 4 items	16	30		22	15
Only 1 of 4 items	10	19		8	6
Benefits					
All 4 of 4 items	2,798	5,779	1,630	6,452	2,907
Only 3 of 4 items	77	175	39	152	94
Only 2 of 4 items	15	22	8	15	15
Only 1 of 4 items	6	7	1	10	7

Exhibit reads: Among teachers who reported participating in high-quality Graduate Courses professional development, for 2,766 teachers, their high-quality indicators were based on all five of the five possible items from the Learning Opportunities cluster. For only 130 teachers reporting participation in high-quality Graduate Courses, their high-quality indicators were based on fewer than all five items in the Learning Opportunities cluster: 95 cases were based on 4 of the 5; 19 on 3 of the 5; 13 on 2 of the 5; and 3 on 1 of the 5.

Source: Questions on quality indicators.

The creation of a summary indicator of participation in high-quality professional development was accomplished in stages. First, for each cluster of items within each type of professional development, a teacher's responses were given a 1=high quality or 0=NOT high quality, based on the rules described above. Then, within each type of professional development, if a teacher rated high quality in all four of the clusters, the teacher was deemed to have participated in high-quality professional development of that type. If any one, two, or three of

the clusters was not high quality, or was missing, that teacher did not participate in high-quality professional development for that type of professional development. If all four clusters were missing for a respondent, that respondent received a missing data designation for that summary high-quality professional development indicator.

Analyses

All analyses were conducted in SPSS 12.0 for Windows, a leading statistical software package, and all analyses applied the case weights developed as described above. Statistical tables and other output from SPSS were then recreated in Microsoft Word or Excel for clearer presentation in the report.

Distributions and Significance

Preliminary analyses involved simply obtaining the percent distribution of responses for each survey item, for the state as a whole, and separately for each school district. Subsequent analyses examined results for a given item, in terms of results on a second item. For example, among the teachers reporting participation in graduate courses, how many also reported that those graduate courses were of high quality? Or, among teachers with less than one year of teaching experience, how many reported participating in high-quality professional development? We do not report *statistical* significance or confidence intervals on outcomes because the large sample sizes essentially ensured that almost every point estimate or comparison was statistically "significant."

It is more useful to consider the *practical* significance of estimates and differences. For example, what is the practical meaning of a difference of 43 percent versus 47 percent? Consider the following:

> *Example:*
> In District A, among teachers with 0-3 years of experience, 47 percent report participating in high-quality professional development, but among teachers with more than 10 years of experience, 43 percent report receiving high-quality professional development.

Depending on a district's current goals and priorities, the four percentage point difference in Example 3.3 may or may not be important. For instance, if the district's goal is to be sure that teachers at all experience levels are receiving the same amount of high-quality professional development, those four percentage points are more important than if the goal is having teachers participate in high-quality professional development at rates closer to 100 percent, which would make both 43 percent and 47 percent equally low. Each district must consider its survey results in the context of that district's current goals regarding professional development.

Grade-Level Disaggregations

One set of analyses involved examining results separately for teachers at different grade levels. MSDE provided a separate data file with information for each school in the state on the following: school type (elementary, middle, high, or other[7]), grades served, enrollment, number of students by ethnicity, number of teachers by years of teaching experience, and number of teachers by certification status. We made use of the school-level teacher data in developing case weights as described above. We also used the school-level data on school type to prepare analyses separately for elementary, middle, high, and other schools. Here, we provide a description of the schools that fell into these four state-defined categories.

The predominant grade span configuration for schools identified by MSDE as "elementary schools" was PreK-5th, accounting for 434 of the 831 state-identified elementary schools (52 percent). Also common was the grade span K-5th, which accounted for 190 elementary schools (23 percent). The narrowest grade spans covered three grades: 4th-6th (n=1 school), 3rd-5th (n=13), and PreK-1st (n=4). The widest grade span configuration was PreK-11th, which accounted for only one elementary school in the state. Details on other grade configurations are displayed in Exhibit E3.

For state-identified "middle schools," the most common grade span configuration was 6th-8th, which accounted for 201 of the 232 middle schools in the state (87 percent). The narrowest grade span was a single grade, 8th Only, which was the case for only one school, and the widest grade span was 6th-12th, which was also represented by only one school.

The prevailing grade span configuration for schools identified by MSDE as "high schools" was 9th-12th, accounting for 186, or 89 percent, of the 209 state-identified high schools. The narrowest high school grade spans covered a single grade: 12th Only (n=3 schools) and 9th Only (n=1). The widest grade configuration for a high school in the state of Maryland was PreK-12th, but there was only one high school with this configuration.

For schools identified by MSDE as being "other" (not traditional elementary, middle, or high schools), the predominant form was a non-graded structure, which accounted for 20 of the 81 other schools (25 percent). Other grade span configurations varied widely, ranging from a single grade such as 9th Only (n=2 schools), to PreK-12th (n=4).

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[7] A content analysis of the names of schools which MSDE categorized as "other" reveals that many are special purpose schools such as alternative schools, transitional programs, special education programs, early childhood centers, academies, Montessori schools, regional schools, language immersion programs, job development programs, etc.

Exhibit E3
Number of Schools in Grade-Span Configurations, by School Type

Elementary Schools		Middle Schools		Other Schools	
Grades Served	Number	Grades Served	Number	Grades Served	Number
4th - 6th	1	8th Only	1	Other	20
3rd - 5th	13	7th - 8th	21	9th Only	2
3rd - 6th	2	6th - 8th	201	9th - 12th	8
3rd - 8th	1	6th - 9th	1	7th - 12th	6
2nd - 5th	4	6th - 12th	1	6th - 7th	2
2nd - 8th	1	5th - 8th	5	6th - 8th	3
1st - 5th	3	4th - 8th	2	6th - 11th	3
1st - 8th	1		*232*	6th - 12th	5
K - 4th	1			5th - 6th	1
K - 5th	190			4th - 8th	1
K - 6th	75	*High Schools*		4th - 12th	1
K - 8th	5	Grades Served	Number	3rd - 5th	1
PreK - 1st	4			2nd - 12th	2
PreK - 1st, 5th	1	12th Only	3	1st - 8th	1
PreK - 2nd	18	11th - 12th	2	1st - 11th	1
PreK - 3rd	4	10th - 12th	3	K - 6th	1
PreK - 4th	9	9th Only	1	K - 7th	1
PreK - 5th	434	9th - 10th	4	K - 8th	5
PreK - 6th	56	9th - 11th	4	K - 12th	1
PreK - 7th	1	9th - 12th	186	PreK - 1st	2
PreK - 8th	6	8th - 12th	1	PreK - 2nd	1
PreK - 11th	1	7th - 12th	1	PreK - 5th	3
	831	6th - 12th	2	PreK - 7th	2
		PreK, 9th - 12th	1	PreK - 8th	3
		PreK - 12th	1	PreK - 11th	1
			209	PreK - 12th	4
					81

Table reads: Out of 831 schools identified as "elementary schools" by MSDE, only 1 school serves a grade-span configuration of 4th – 6th grades.

Source: MSDE school-level data file.

Appendix F

Recommendations for
Subsequent Survey Administration

Recommendations for Subsequent Survey Administration

These recommendations are intended to help MSDE and districts work together to increase response rates and to minimize the response burden on districts and schools in future rounds of the biennial survey of *Teacher Participation in High-Quality Professional Development.*

Before offering specific recommendations, it may be useful to review the key components of survey administration in the 2003-2004 survey and to describe possible burdens to districts:

■ MSDE asked superintendents to name a staff liaison to the survey contractor. Typically, liaisons were directors of professional development or staff in district professional development offices. In a few districts, technology coordinators served in this role, and in a few other districts, an assistant superintendent was designated as the liaison.

■ Beginning in March 2004, MSDE staff and the survey contractor met with district liaisons and other staff on several occasions to review the survey instrument and the basic plans for survey administration. At that point, it was agreed that the contractor would provide districts with an electronic version of a letter from the State Superintendent of Schools inviting teachers to complete the survey. This letter, which described the survey and its purpose, included an electronic link to the survey. Teachers who received this letter as an email attachment could click on the link and go directly to the survey.

■ The contractor also provided information packages for distribution to school principals. These packages contained Frequently Asked Questions and guidance to principals on their role in survey administration. The package also contained a copy of the letter to teachers.

■ MSDE and the contractor recommended, but did not require, that the letter from Dr. Grasmick be transmitted as an attachment to an email message from the superintendent or other district leader with words of encouragement to complete the survey. In addition, MSDE and the survey contractor recommended that district staff and/or principals set aside time, in a regularly scheduled faculty meeting or during a professional development day, for teachers to complete the survey.

■ Although it was not explicitly mentioned in the instructions for completing the survey, teachers had the option of using the survey link on home or personal computers. The survey administration software did, however, require them to complete the survey in a single sitting.

■ Teachers or others with questions about the survey could use a toll-free number or email to contact the survey administrator.

■ The survey was administered online in 22 of the 24 districts. (Teachers in two districts completed paper-and-pencil versions of the survey.)

■ Sources of burden to the district liaisons and principals included the following:

  ■ The need to communicate about the survey within the districts, especially to district leaders and to the principals

  ■ The need to arrange for electronic dissemination of the letter from Dr. Grasmick

  ■ The need for site liaisons to work with and through other district staff with more direct lines of communications with principals

  ■ The need for site liaisons to work with other district staff to schedule times for all teachers to complete the survey

  ■ The need for principals to encourage teachers to respond to the survey and to schedule a time for teachers to respond

  ■ The need for site liaisons to follow up with principals in schools with low initial response rates

  ■ The need for principals in schools with low initial response rates to encourage teachers to complete the survey

  ■ The need for liaisons, principals, and other district staff to arrange and facilitate administration of paper-and-pencil version of the survey (in two districts)

In feedback to the survey team after survey administration was completed, district liaisons pointed to several factors that were most likely to contribute to increased burden. First, if the district liaison did not have direct access to principals, it was sometimes difficult to work with those who did have access to ensure that principals knew about the survey and understood their responsibilities for encouraging teachers to respond. According to some liaisons, this problem was compounded if the survey did not have a clear endorsement from a district leader. In several districts, teachers did not receive the letter from Dr. Grasmick in an electronic format. This meant that they had to key in the Internet address for the survey host, which in turn resulted in errors and difficulties in gaining access to the survey. Together, these factors led to low initial response rates in some schools and districts and a continuing need for site liaisons to communicate with principals and other district staff who had direct access to principals to encourage them to encourage teachers to complete the survey. Put somewhat differently, early and sometimes continuing gaps in communications about the survey compounded the burden as

district liaisons made repeated efforts to increase response rates. In districts where the early communications were effective and there were special arrangements for teachers to complete the survey, the burden was considerably smaller.

The following recommendations for future cycles of survey administration are based on experiences from the first cycle and feedback and suggestions from the district liaisons:

■ ***MSDE should communicate early and often with the districts about plans for survey administration and expectations for the district role.*** Assuming that survey administration will take place in late April or early May, MSDE should announce the schedule no later than January 15th and should distribute initial guidance to the districts at that time. The guidance should:

   ■ Explain the purpose and organization of the survey;

   ■ Explain the overall approach to survey administration and reporting;

   ■ Clarify expectations for how MSDE and the districts will use survey results, especially in preparing mater plan updates; and

   ■ Recommend, but not require, that districts set aside time for teachers to complete the survey.

   Initial communications with the districts should concentrate on building support and commitment to the survey among superintendents and other district leaders. Subsequent communications should target district staff who are assigned to serve as liaisons to the study team.

■ ***MSDE should encourage districts to assign staff who are well-connected with principals to organize survey administration.*** These arrangements will vary from one district to the next, but the essential feature should be that district staff who routinely communicate and work with principals should be assigned the task of making sure that principals understand the survey and their responsibilities for encouraging teachers to respond. These individuals should also be responsible for follow up with principals in schools with initial low response rates.

■ ***MSDE should communicate about the survey with key professional associations, including the Maryland State Teachers Association, the Maryland Association of Elementary School Principals, the Maryland Association of Secondary School Principals, the Maryland Council of Staff Developers, and the Maryland Association for Supervision and Curriculum Development.*** MSDE should invite these organizations to endorse the survey and to use their communication channels to encourage their members to support the survey.

■	*MSDE should require the survey team to establish reliable mechanisms for district staff, principals, and teachers to communicate with the survey team about questions and concerns that arise about the survey.* The survey team could, for example, establish a toll-free number and a dedicated email address for these communications.

Finally, it is important to note that there will always be at least a modicum of burden associated with survey administration. Online administration greatly reduces the burden. Effective and ongoing communication and careful planning can reduce the burden even more.